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IF YOU WANT BEES

That will just "roll" in the honey, try **Moore's Strain of Italians**, the result of twelve years' careful breeding. Reduced prices: Warranted queens, 80c each; 3 for \$2.00. Strong 3-frame nucleus, with warranted queen, \$2.50. Safe arrival and satisfaction guaranteed. Those who have never dealt with me I refer to A. I. Root, who has purchased of me, during past 11 years, 505 queens. Circulars free. □ 13-14d

J. P. MOORE, Morgan, Pendleton Co., Ky.
Money-order office, Falmouth, Ky.

Please mention this paper.

7d

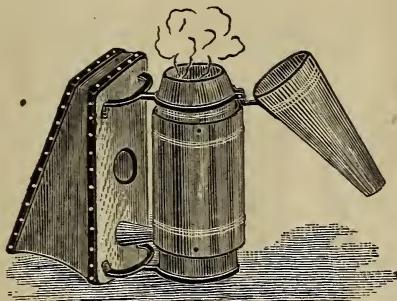
On Their Own Merits.

I am making a specialty of breeding **Golden and Albino Italian Queens**. My **five-banded bees** are equal to any as honey-gatherers, and they are the most beautiful and gentlest bees known. Warranted queens, May, \$1.25; six for \$6; after June 1, \$1; six for \$5. Satisfaction guaranteed. I have a few 3-banded tested queens at \$1 each.

CHARLES D. DUVALL,
Spencerville, Montg'y Co., Md.
Please mention this paper.

ITALIANS Tested queen, \$1.25; Untested, 80c. Nuclei, brood, and bees by the lb. Send for price list.
MRS. A. M. KNEELAND,
Mulberry Grove, Bond Co., Ill.
9tfdB Box 77.

Please mention this paper.



Smokers, Foundation, and all kinds of bee-keepers' supplies furnished at lowest cash price. If you want the best Smoker in the market get one of the Quinby old reliable made the strongest; and although the first cost is more than that of any other made, the Jumbo is the boss of all. It has been used constantly in yards for 8 years, and still it goes. Send and get price list of Smokers, Foundation, Sections, and every thing used in the apiary. Dealers should send for dealer's list on smokers. 4-14d

W. E. CLARK, ORISKANY, N. Y.

In responding to this advertisement mention GLEANINGS.

THE CANADIAN

Bee Journal **Poultry Journal**
Edited by D. A. Jones. Edited by W. C. G. Peter.
75c. Per Year. 75c. Per Year.

These are published separately, alternate weeks, and are edited by live practical men, and contributed to by the best writers. Both Journals are interesting, and are alike valuable to the expert and amateur. Sample copies free. Both Journals one year to one address \$1. Until June 1st we will send either Journal on trial trip for 6 months for 25 cts.

The D. A. Jones Co., Ltd., Beeton, Ont.
Please mention GLEANINGS.

HONEY COLUMN.

CITY MARKETS.

CHICAGO.—**Honey.**—Receipts of comb honey up to this date of the new crop can not grade as white, with few exceptions. Sales are small at about 17c per pound. Extracted quiet, as nearly all the offerings are off in color or flavor. Dark honey sells at 6c; white, 7c; with a little fine clover occasionally selling at 8c. **Beeswax**, 28c. **R. A. BURNETT,**

July 7.

Chicago, Ill.

SAN FRANCISCO.—**Honey.**—Stocks on hand of extracted and comb honey are very light. Small shipments of new crop of extracted are arriving. Season is late on account of the continued cold weather. We quote: White extracted, 6@6½c; light amber, 5½@5½; amber and candied, 5@5½. Comb honey, nominal, 10@14; the latter price for 1-lb. fancy.

SCHACHT, LEMCKE & STEINER,
San Francisco, Cal.

June 25.

DETROIT.—**Honey.**—New honey in light demand 13@15c. Extracted, 8@9c. **Beeswax** easier at 27@28c. **Bell Branch, Mich.**, July 8. M. H. HUNT.

COLUMBUS.—**Honey.**—Honey, if choice clover, sells at 15@16c. Dark not wanted; no sale.

EARLE CLICKENGER,

Columbus, Ohio.

ST. LOUIS.—**Honey.**—Demand for both comb and strained very light. We quote comb, choice white, 12@13c; dark, 10@12. Strained, in cans, 7@7½; in barrels, 5@5½. **Beeswax**, prime, 26½c.

D. G. TUTT GROCER CO.,
St. Louis, Mo.

BOSTON.—**Honey.**—Best white comb honey, 16@18. Extracted, 7@9. **Beeswax**, 28. Stock on hand light; trade light.

BLAKE & RIPLEY,

Boston, Mass.

KANSAS CITY.—**Honey.**—The new crop is very slow coming in. We have had few small shipments. Choice white 1-lb. comb is selling at 15@16c; no demand at present for 2-lb. comb or extracted. **Beeswax** 25c. **CLEMONS, MASON & CO.**, Kansas City, Mo.

NEW YORK.—**Honey.**—California honey is coming slowly; have bought some to arrive. Southern coming, and has a ready sale at 75@80c, according to quality. **Beeswax** selling at 28@30c. We shall handle comb honey this year on a large scale, having new outlets for the product.

THURBER, WHYLAND & CO.,
New York.

ALBANY.—**Honey.**—We have received one consignment of new N. Y. State comb honey. The quality is only fair clover, and some of it sold at 16c. There is but very little demand yet.

CHAS. McCULLOCH & CO.,
393-397 Broadway, Albany, N. Y.

CINCINNATI.—**Honey.**—Demand for honey is fair only, with a good supply of all kinds. This is the dull season of the year. Choice white comb honey brings 12@15c in the jobbing way. Extracted honey 5@8c on arrival. **Beeswax** is of slow demand, with a good supply at 23@25c on arrival for good to choice yellow.

CHAS. F. MUTH & SON,
Cincinnati, O.

FOR SALE.—3000 lbs. of comb honey in sections.
A. FIDDES, Centralia, Illinois.

FOR SALE.—I have a lot of honey in 60-lb. tin cans, two cans in a case, which I wish to dispose of. I have also comb honey in one-pound sections. Write. **J. D. ADAMS**, Nira, Ia.

I am prepared to furnish pure extracted honey in 60-lb. tin cans. New cases and cans; graded goods. Carloads a specialty. Address **E. LOVETT,**
11tfdB San Diego, Cal.

WANTED.—2000 lbs. comb and 2000 lbs. extracted **W** honey. Those having either to sell will please write me, stating amount, price wanted, how packed, and, if possible, send sample. Address
13tfdB **S. RAY HOLBERT**, Monongah, W. Va.

PASTEBOARD BOXES.

**CRAWFORD'S SECTION CARTONS
ARE JUST WHAT YOU WANT.**

SEND FOR NEW PRICE LIST.

A. O. CRAWFORD,

11tfdB **SOUTH WEYMOUTH, MASS.**
In responding to this advertisement mention GLEANINGS.

GOLDEN ITALIAN QUEENS.

Our 5-banded Italians are giving perfect satisfaction; gentle, excellent workers, non-robbers, and the most beautiful bees in existence. Won first premium at Illinois State Fair in 1890. The judge said, "The drones are the yellowest I ever saw." Queens warranted purely mated; and replaced if they produce hybrid bees. One warranted queen, \$1.00; six for \$5.00; tested, July, \$1.75; after, \$1.50; selected tested, \$3.00; breeders, the best, \$5.00. A few solid-yellow warranted queens, at \$1.50. No foul brood. Safe arrival and satisfaction guaranteed. Reference, our P. M.

S. F. & I. TREGO, Swedona, Ills.

Please mention this paper. 1tfdB

OTTUMWA BEE-HIVE FACTORY.

We have a nice supply of hives in the flat, which we will sell as follows: The A. I. Root Simplicity, for extractor, \$1.50; 5 for \$7.00. Simp. for comb honey, with 2 T supers, sections, foundation starters, wood separators, and honey-board complete, in flat, each, \$2.10; 5 for \$10.00. Portico hive with Simplicity upper story, in flat, for the same price.

The improved Langstroth-Simplicity, in flat, eight-frame, 1½ story, each, 90 cts.; 5 for \$4.00; ten-frame, 1½-story, each, \$1.00; 5 for \$4.50; eight-frame, 2-story, each, \$1.20; 5 for \$4.75; ten-frame, 2-story, each, \$1.30; 5 for \$5.25. Dovetailed hives, the same price as the eight-frame hives above.

SHIPPING-CRATES.

12-lb. crate, 11 cts. each; 16-lb., 13 cts.; 24-lb., 14 cts.; 48-lb., 16 cts. each.

Comb foundation.—Heavy brood, 48c; thin, 58c; extra thin, 68c.

Pound sections, snow-white, at \$3.50 per 1000. No. 1, cream, \$3.00. Bee-veils, cotton tulle, with silk tulle face, 75 cts. each. Bingham smokers at manufacturer's prices. Write for prices to 5tfdB

GREGORY BROS. & SON, OTTUMWA, IA. SOUTH SIDE.

In responding to this advertisement mention GLEANINGS.

PATENT WIRED FOUNDATION.

The Greatest FOLLY of MODERN BEE-KEEPING is WIRING BROOD-FRAMES.

—Dr. G. L. Tinker.

OUR WIRED BROOD FOUNDATION is BETTER, CHEAPER, and not HALF the trouble to use that it is to WIRE FRAMES. Many may confound the two, but they are ENTIRELY different.

J. VAN DEUSEN & SONS, Sole Manufacturers, Sprout Brook, Mont. Co., N. Y.

In responding to this advertisement mention GLEANINGS.

64d

Porter's Spring Bee-Escape.

We guarantee it to be the best escape known, and far superior to all others. If, on trial of from one to a dozen, you do not find them so, or if they do not prove satisfactory in every way, return them by mail within 90 days after receipt, and we will refund your money.

PRICES.—Each, by mail, postpaid, with full directions, 20c; per dozen, \$2.25. Send for circular and testimonials. Supply dealers, send for wholesale prices.

10tfdB R. & E. C. PORTER, LEWISTOWN, ILL.

In responding to this advertisement mention GLEANINGS.



A glimpse of our Factory, now making carloads of Dovetailed Hives, Lang. Simp. hives, plain Lang. hives. Alternating hives, Chack hives, sections, etc. Many articles not made by others.

We can furnish, at wholesale or retail, Every thing of practical construction needed in the apiary, and at Lowest Prices. Satisfaction guaranteed. Send for our New Catalogue. 51 illustrated pages, free to all.

E. KRETCHMER, Red Oak, Iowa.

In responding to this advertisement mention GLEANINGS.

Positively by Return Mail.

After June 26th, we shall be prepared to ship our beautiful Golden Carniolan and Golden Italian queens by return mail.

PRICES OF ITALIAN QUEENS.		
WARANTEED.	TESTED.	SELECT TESTED.
1 queen, \$ 1.25	1 queen, \$ 2.00	1 queen, \$ 3.00
2 " " 2.25	2 " " 3.75	2 " " 5.50
6 " " 6.50	6 " " 10.00	6 " " 15.00
12 " " 12.00	12 " " 18.00	

Golden Carniolan queens each \$2.00.

If you rather see these queens before paying for them you can. Safe arrival and satisfaction promised in all cases. **HENRY ALLEY, WENHAM, MASS.**

Please mention this paper.

EVERY THING

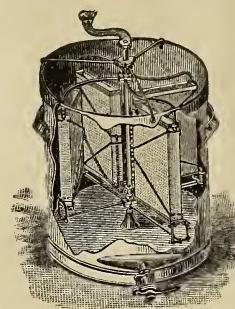
USED BY

BEE - KEEPERS.

EDWARD R. NEWCOMB.

Pleasant Valley, N. Y.

CATALOG FREE



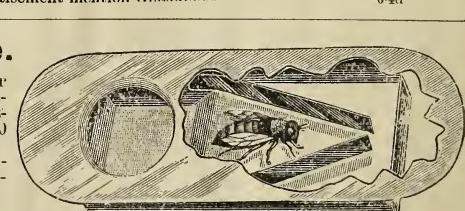
5tfdB Please mention this paper.

Bee - Keepers' * Supplies.

We are prepared to furnish bee-keepers with supplies promptly and at lowest rates. Estimates gladly furnished, and correspondence solicited. Our goods are all first class in quality and workmanship. Catalogue sent free. Reference, First National Bank, Sterling, Ill. Address

**WM. McCUNE & CO.,
Sterling, Illinois.**

In responding to this advertisement mention GLEANINGS.



GLEANINGS OF BEE CULTURE

A JOURNAL
DEVOTED
TO BEES,
AND HONEY,
AND HOME
INTERESTS.

Published by A. I. Root, Medina, O.

Vol. XIX.

JULY 15, 1891.

No. 14.

STRAY STRAWS FROM DR. C. C. MILLER.

THE BOOM IS ON for extra-yellow bees.
WANTED. A plan to prevent swarming.
I WISH you could all see my bed of roses.
IS A $\frac{1}{2}$ TOP-BAR thick enough? I'm afraid.
IN SPITE OF MYSELF. I like the Hoffman frame. Much.

HUTCHINSON sits up nights studying how to make his advertisements look nice.

WHAT SWEETER MUSIC than the roar of the bees at night after a hard day's work?

OUT-APRIARIES require, you will find, some little difference in plans from home apiaries.

THE A. B. J. has gotten out a list of 111 beekeepers' associations in the U. S. Big job.

HUTCHINSON'S NEW BOOK, "Advanced Bee Culture," is a fine specimen of boiling down it's good.

THE Review, backed by Prof. Cook, says the Union ought to prosecute adulteration. The manager says no.

THE DETROIT Journal has been mulcted \$500 for its little joke of giving a local habitation to the "Wiley lie."

EDITOR NEWMAN has done a nice thing by getting up a capital index at the close of the half-year of A. B. J.

"LET US BE ABLE," says Hutchinson, "to control swarming, and what would be the result?" Don't tantalize us with such conundrums.

IF ANY LADY or gentleman knows just why bees swarm, please don't be backward about coming forward, and speaking right out in meeting.

DO BEES swarm and stay swarmed without a queen? It scarcely seems possible, yet I have had two or three cases that I can hardly understand any other way.

SEVERAL TIMES I have found young queens in queen-cells wrong end foremost. They can't turn around in the cell, can they? Do the bees let them out, or do they die in the cell?

THAT SECTION-PRESS of Hubbard's is fine. But he ought to be prosecuted for making that boy in the picture stand up to make sections. I stand the press on the floor, and then sit a-straddle.

THICK TOP-BARS for me, if for no other reason than to keep them straight. I used to say that my $\frac{1}{2}$ top-bars didn't sag, but that was because I didn't look close, and didn't realize how exacting the bees are about spacing.

A PROPHET in Tennessee sent me word that I should have a failure of white clover this year. I never knew the fields and the roadsides whiter with clover bloom; and the only failure just now that seems likely to occur is a failure to have enough sections ready.

SQUARE CELLS. Cowan, in "The Honey-Bee," gives an illustration of a piece of comb that D. A. Jones gave him, and the cells are nearly square. If Mr. Cowan's reputation for veracity were not so well established, I shouldn't believe bees had ever made such cells.

J. P. ISRAEL thinks the cause of the "dwindling" of all the defunct bee-journals is his writing for them. I didn't know before that he was so voluminous a writer. Try your hand on the C. B. K., friend Israel. It certainly doesn't look very "dwindly" at present.

EMMA IS ENTHUSIASTIC over the latest Clark smoker. Whereas formerly her aprons were riddled full of holes from smoker sparks or coals, throughout the whole season so far she hasn't had the teeny-tointiest bit of a hole. I like it because she doesn't spend half her time cleaning it out.

SHADE. The other day Emma was working at some hives in the broiling sun, and I took a little boy's spade having a handle of the inconsistent length of five or six feet, tied an umbrella on the top of it, and then ran the spade into the ground. Works easily, can be changed in a minute, and is lots of comfort.

MANUM'S SWARM-CATCHER has been lying around for two years, and I didn't think it of much importance, having never had use for it. The other day two swarms came out that I feared had young queens, and I found the "catcher" a jewel. If I encouraged natural swarming, I should never be without one or more.

HAVE YOU TRIED raising queen-cells under a full colony with a laying queen? Put one or two frames with some eggs or just hatched larvae into an empty hive; fill it up with dummies; set it under your full colony, with a cloth or a thin board between, of course not preventing the bees from going up, and see if you don't get queen-cells of first quality.

POLLEN IN QUEEN-CELLS I had considered as positive proof of a colony being hopelessly queenless. Several times, however, I have thought I met exceptions; and June 30 I found two queen-cells with pollen, in a hive having a good laying queen. The hive had been filled with foundation eight days previously, so the cells were made on the new comb built on the foundation, the colony not having been queenless this year.

QUEENS HATCH in how many days after the laying of the egg? Sixteen days is the orthodox answer. Thirty years ago it was between 17

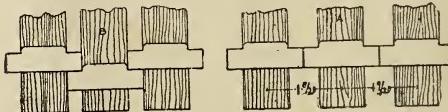
and 18 (*A. B. J.*, Vol. I., p. 199). Cowan says 15. Will it come down to 10 in 30 years more? No, the bees have not changed. For if the work is done in a small nucleus to-day it may take 18 days; but if the egg is laid in a strong colony, and left there, during the season when bees naturally raise queens—in short, as queens are actually raised by the bees undisturbed—15 days is right.

Honey-Producers' Exchange, we will undertake the expense, and publish reports for Canada along with the others.]

FIXED DISTANCES IN ENGLAND.

THE W. B. C. METAL ENDS.

In GLEANINGS of April 15 is an article headed "Objections to Fixed Distances." With reference to this matter, I have before written, advocating the use of W. B. C. metal ends, which allow of the frames being placed at any interval from $\frac{1}{4}$ inches, center to center, to $1\frac{3}{4}$. See diagram. As regards the question of moving bees with these metal ends, nothing could be more simple. Two strips of wood are laid (one at either end) across the ends of the frames over the metal ends; and where it is intended to move frequently, it may have a button to hold the strips; but when it is for only one removal, a screw at each end will be all that is needed. Then for the question of propolis: I never have frames glued real fast with the W. B. C. ends; but if I let the ends of the frames rest in a rebate, or rabbet, I am sure to have the frames so fixed as to be quite unable to move them without a lever of some sort. I have had no experience with a closed-end-frame hive; but I should imagine that it is a return to very primitive times, since Huber made a hive which was closed end all round, which is now known as "Huber's book-hive." The W. B. C. ends are not found to be in the way of the knife when uncapping; and, if owing to circumstances of which I have no knowledge, they were found to be so, they are removed without much trouble, simply by sliding them off from the end of the frame. I will inclose a diagram of the W. B. C. end, in different positions for wide and narrow spacing.



In England the W. B. C. end has whipped very nearly every thing else out of the market; and from the description of the Hoffman frame, I imagine that frames fitted with W. B. C. ends would answer in the hands of a novice quite as well if not better than the Hoffman.

EXCLUDER ZINC.

A great deal has been said about excluder zinc. I have lately seen a pattern of Dr. Tinker's excluder zinc, and find that the main and only difference between it and some that was described in the July issue of the 1888 *Bee-keepers' Record*, as made by Messrs. F. Braby, the design of which was stated to have been registered, is that the openings are a degree longer and narrower, and that Dr. Tinker makes his without any "burr." I like Tinker's pattern very much for its better finish; but when I have said that I have said all that I can see to be novel in its construction or design. I think Mr. West's cell-protector a very neat contrivance, and only wait opportunity to try one.

THE WATER CURE.

When I came to your own work, "Wash ye, make you clean," it reminded me that, as I had a very severe cold, I might get clear of it, as I had done on previous occasions, by going to George's Pier-head (salt water) baths, Liverpool, and have a swim. I did so on Saturday, and woke up Sunday quite free of it. My plan is, to dive three or four times, swim the length

GENERAL CORRESPONDENCE.

COMB FOUNDATION.

SOME STRONG ARGUMENTS FOR ITS USE IN THE BROOD-CHAMBER.

Friend Root:—This spring Goold & Co. established an apiary at the Homedale, and I think any one who would have looked through that apiary of some eighty odd colonies would have been a thorough convert to the use of *full sheets* of comb foundation in the brood-chamber. We were very busy for a time, and colonies purchased from all parts of the country, and all grades, from light pure Italians to black German bees, had their own way as to drone production, as far as the combs would allow them, and they made good use of their liberties. The time came when, for the sake of the young queens soon to be mated, undesirable drones had to be destroyed, and it was then we found how many there were. We trapped thousands and thousands of drones worse than useless to us, and in the production of which not only much valuable honey had been lost, but, if they had not taken the room, workers would have been reared, meaning another loss in the working force of the apiary. Italian colonies we allowed to rear all the drones their combs would allow, and some of these have so many drones I do not believe they will either swarm or store much in the surplus apartment. Why is this loss? Just because it was desired to effect a saving in comb foundation. But, was it a saving? Surely not. A little outlay in the beginning would have avoided this drone comb; and not for one batch of drones only, but for many. I think no one can point out a system of securing with certainty all worker combs. The bees will build worker comb until the first young bees emerge from the cells after swarming; then if they build at all they will build drone comb. Of course, we must allow for variations of a slight nature. But to tell a bee-keeper, and especially one of experience, that it is not expensive to use only starters, is, I think, a grave error in judgment. I say nothing about the many other arguments in favor of full sheets of foundation. There is only one instance in which I use starters; and that is, where I put swarms on them to get comb honey for exhibition purposes. I then sacrifice the comb for a special purpose.

I like GLEANINGS just as it is. If there were one wish I could have, it would be to have the honey statistics of Canada as well as of the U. S.

R. F. HOLTERMANN.

Brantford, Ont., Can., June 29.

[You have given some heavy arguments for comb foundation. Chalon Fowles says he can not afford to buy hives, but he can afford to buy brood-frames and foundation. Foundation he *must* have. In regard to statistics for Canada, if you Canadians will give a list of bee-keepers who will agree to report, and if it is agreeable to the officers of the United States

twice, and come right out and get dried (well rubbed), and then go and have something to eat. This acts much the same as Hill's "nasal douche," as, when under water, a quantity enters the nostrils, driving back the air till the head is again above water. I have never managed yet to get clear of a cold by a fresh-water bath.

With regard to "what is the matter with our Patent Office?" I may state that, in England, our Patent Office grants patents for the same thing (and does not pretend to make any search) to as many as like to apply; and it is only in the case of an "opposition" that the thing gets settled right off as to who is the "true and first inventor." It would seem as if your Patent Office were going to get on to the same lines.

HAROLD H. LINDON.

Liverpool, England, June, 1891.

[Knowing the tendency of your bee-keepers toward fixed distances, I have been watching closely what has been said on the subject. The W. B. Carr ends have always struck me as being good. I judge they are stamped out; but I notice the price is five shillings sixpence per gross, which would make about \$1.65 in our money—something over a cent apiece. This would add two cents to the original expense of the wood parts of the frame and their use. Still, that price would not be prohibitory. The scheme for using wide or narrow spacing is very unique; but I do not suppose that it would pay a bee-keeper to change his hives over from season to season. But as there are a few who prefer $1\frac{1}{2}$ spacing, or $1\frac{3}{5}$, they can take the wider spacing with these metal ends, instead of $\frac{1}{4}$, if they prefer. You say these metal projections do not interfere with uncapping. I believe you are right. In the main, I believe this objection has existed more in imagination than in actual practice.]

E. R.

HANDLING HIVES INSTEAD OF FRAMES.

FRIEND GRAVENHORST SHOWS THE ADVANTAGE OF SO DOING.

Friend Root:—I was much delighted in reading GLEANINGS for May 1, p. 388, where I found a letter from Mr. A. F. Brown, and your footnote to it. Yes, you and Mr. B. have undoubtedly hit the point exactly; and never, I think, was a word truer than yours: "Sooner or later bee-keeping has got to resolve itself into the handling of hives more and frames less." You say further: "It may be truthfully said, that old bee-keepers do not spend the time they once did over their bees; and we think it is equally true, that, as our industry progresses, bee-keepers as a class to-day, or in the near future, will not spend the time over their bees they did a few years ago; in other words, they will get a thousand pounds of honey with less labor."

Now, friend R., let me tell you why I rejoice over your words. First, those words came from one whose name is known to bee-keepers all over the world; and because you fully know, I believe, what you are speaking of as an authority in bee-matters. Second, because I have fought for that principle to which you give expression in those words, nearly as long as I have kept bees in movable-comb hives. Descended from a family which was in the bee-business for generations, I kept bees at first just as did my forefathers in the old Lüneburgian straw skeps; and, I may say, with no less success than they. Our crop from 60 to 80 colonies, spring count, which were increased, by swarming and driving, to 180 or 240 colonies, was, in the best seasons, from 3900 to 6000 lbs. of honey, and from 50 to 80 lbs. of wax—a yield that is to

this day not uncommon among our old-fashioned bee-keepers in North Germany, especially in the province of Hannover; and, what is the main thing, they get it at less cost of labor and time than bee-keepers do to-day with their movable-comb hives.

At the time I became well acquainted with Dzierzon's writings and with himself, I got some Dzierzon and Berlepsch hives, and kept bees in them by way of trial. But I soon found out something by this new method that did not satisfy me in contrast with the old one. In the course of several years I always got more honey and wax in the old-fashioned way, with my old Lüneburgian straw skeps than with my accurately constructed and skillfully handled Dzierzon and Berlepsch hives; and last, but not least, with undoubtedly less cost, labor, and time. What was the reason? Not taking into the account that the bees did not do as well in winter, nor thrive early in the spring in this frame hive, experience soon convinced me that the principal point was, that I could handle my old skeps instead of individual frames, and get a thousand pounds of honey with less labor. Of course, my experience would have prompted me to abandon the movable-comb hive totally had I been blind enough to misunderstand the great advantages of the latter. What was to be done under such circumstances, not to fall out of the frying-pan into the fire? All things considered, I thought: How would it be if you combine the great advantages of the Lüneburgian straw skep with the superiority of the movable-comb hive? This idea was strengthened by Dzierzon and Berlepsch. Both of them wrote at that time in their works as well as in the *Bienenzzeitung (Bee Journal)*, that, if it were possible to furnish the Lüneburgian straw skeps with suitable frames, there would be no better hive than such a one, in regard to wintering bees, rapid increase in the population of colonies in the spring, and, not least, easy manipulation; but the cylindrical shape and the arched top of the old hive would not permit this. All right, I thought; but, why not alter the shape and enlarge the hive to a moderate movable-comb hive? The result of my endeavor was the construction of a hive of which you will find some pictures in Dadant's Revised Langstroth. It is this: The old Lüneburgian skep with the arched top, only larger, and not in the shape of a cylinder; but by means of this it is furnished with 16 movable fixed frames, nearly as large as the Langstroth frames. Although Dzierzon, Berlepsch, and other prominent bee-keepers in Germany acknowledge the great value of this hive, it is adopted, with few exceptions, only by such bee-keepers as have kept bees in the old straw skeps, and therefore they know by experience the great advantages in handling bees by turning the hive over and manipulating the whole hive. On the other hand, this hive has met more vehement opposition than all others. But that is easy to understand. He who has never handled bees in the Lüneburgian straw skeps, especially in the rational way, like the bee-keepers of North Germany, can not have the slightest idea of the advantage bees may be handled with in such hives.

The greatest objection to this hive has been the inversion, or turning over, before one can manage the bees. But by doing it in the right way it is not a bit more troublesome than to take off a well-filled super from a Dadant hive. If you have those skeps standing on the ground (as is always the case in America), you do not have to lift the whole hive—only to turn it toward you. Let it first rest on the front edge, then on the front side, and at last on the top.

Now, I don't intend to urge any of my brother bee-keepers in America to accept this mova-

ble straw hive—no, not in the least. Their honey-market and other circumstances are different from those of Germany in more than one respect; and, besides that, I am fully aware that the hive used in America is the most suitable one for the wants of the American bee-keepers. But as there is nothing perfect in this world of trouble, and progress must take place everywhere, I am convinced that very decided progress will be put forward in that line which has been pointed out by you, friend Root, and by Mr. Brown—*handling hives more, instead of frames*. How this is to be done in the most suitable way, in your country, will, no doubt, be shown by American bee-keepers without any assistance from other countries. James Heddon has already taken a great step forward; and other steps of importance, to further your idea are, I think, the accession of the fixed Hoffman frames and the movable bottom-board.

After these preliminary words, let me explain in what way you, friend Root, and Mr. Brown have advanced a most valuable idea in the bee-keeping world by advocating the handling of hives instead of frames. You will allow me to describe this by referring to my hive, as I lay great stress thereon. American bee-keepers do not think ill of my hive; but I wish to convince them that it is not the production of the writing-table, but the fruit of careful experience, and such a one as has helped me to raise a crop of honey not surpassed by any other bee-keeper in Germany, unless by one of my disciples.

The handling of the hive, and not touching any of the frames, can be accomplished if the colonies are in a normal condition, as a colony will be if the bee-keeper did his duty at the close of the previous season, and the wintering was good. Of course, there will be exceptions to the rule; but of such I shall speak by and by. As for these colonies, the movable comb and handling of frames is of the greatest benefit. I handle hives: 1. After the first cleansing flight in the spring. I do not have to remove any warming materials, quilts, nor to open a door, as is necessary with side-opening hives. I simply turn my hive over, in the way before mentioned. This gives a most complete view of the interior of the hive, not limited by wide top-bars and thick honey-combs, or one single comb, as is the case with German hives. I see how many spaces between the combs are filled with bees, and how strong the colony is. No one will deny that an exact knowledge of this is of great importance every time. If the bees come up briskly from a compact cluster below, then I take it for granted the colony is not queenless. Should the bees not sit in a compact cluster, but more scattered between and on the combs, then the colony is most probably queenless. A few puffs from the smoker will drive the bees down. I now let the bright daylight in, and see whether there is brood in the comb or not; and then should I not see what I wish to, I push aside two combs from those in the middle of the cluster, and take them out of the hive to look after the queen or eggs. In the same way I find out how it is with the provisions, providing lifting the hive and weighing it in my hands has not told me what I wished to know. Finding all is right, as a good normal colony always will be, the whole task is done without handling any frames. In less than a minute the hive stands again in its old position—no replacing of a quilt or warming materials, nor a window; no loss of heat from the brood-nest, no tearing up of the nicely glued cover to cause a draft of air from the entrance through the cluster of the bees to the top of the hive. If not prevented by loss of time, there is no disturbing the bees by handling frames. To let the bees alone till a time of mild weather would not be judicious. The

sooner I know the wants of a colony, the sooner I can help. I do not need more than three hours on the day following a cleansing flight, to know the minute conditions of hundreds and more of my colonies; besides having swept with a brush the dead bees and the cappings of the honey-cells from the floor board, saving more than four pounds of wax from a hundred colonies in this way. All colonies that need my further attention (and these are always a considerable part) get one, two, or three sticks on the front side, according as the brood-chamber is to be contracted, queenlessness is suspected, or stores are supplied. In these colonies, as exceptions to the rule, I do not avoid handling the frames; on the contrary, in such cases it is a benefit to help them by means of the movable combs.

I handle only the hives, to know whether a colony is on the swarming-point, or fit to swarm artificially. No one will deny that it is of great importance to know this. I simply turn the hive over, giving a few whiffs of smoke; and now, as the true workingplace of the colony lies open before me, I see whether queen-cells are started, whether there are eggs in them or larvae, or on the point of being capped over, or have reached maturity.

All my hives have a space of from two to three inches beneath the small bottom-bars of the frames, as such a space secures a good wintering, and shows me whether a colony is ripe for artificial swarming, or whether I have to extract honey. As soon as I see, by simply turning over, that the bees begin to start combs beneath the bottom-bars, I know for certain that the colony is ripe for artificial swarming, or that I have to take out some capped honey-frames, and insert other full combs to be again filled with honey. You see, friend R., the chief point in most cases is to learn the true condition of the colonies, without handling frames, covers, quilts, doors, etc.

TO CONTROL COMB-BUILDING SWARMS.

Whether I have given only starters or full foundation, I must always strive to secure perfect combs. Without such combs, the movable-comb hive is nonsense, and more objectionable than an old skep or box hive. All my thousands of combs in frames are perfect—not crooked in any way, nor do they show any drone-cells where I did not allow them to be built. Therefore I have no more drones in my hives than I wish. A drone-trap is for me a useless thing, and not to be seen in my apiary.

To avoid faulty combs, one must have the easiest control of the comb-building swarms; and that is to be accomplished in the most complete way by turning the hive over. Then one has a view of the actual workhouse of the bees. Here is performed comb-building; and there is to be seen the busy life of the colony; here are hanging the wax-secreting and comb-building bees. A little smoke, and one sees the new combs built on the starters, or the finishing of the foundation. In most cases I remove the beginnings of drone-combs, and also regulate crooked combs by a so-called drone-knife—a hooked knife with a long handle. Of course, in some cases the drone-knife will not do all that is to be done to secure perfect combs; but then, one may handle one or two frames to do the rest. If I have before me a normal colony, or such a one as has worked according to my wishes, I need not handle a single frame. An inversion of the hive, a few puffs of smoke, a peep at the combs, an inversion of the hive to its normal position, and the work is done in less than a minute.

Now, friend Root, I could point out to you far more advantages in handling hives instead of

frames: but it may be enough to show of what great importance your and Mr. Brown's suggestions are for the advancement of bee-keeping. As I have said before, I am of the opinion that American bee-keepers will themselves soon find out in what way this is to be carried out with their unsurpassed Langstroth hive; and I should be very glad to learn from them how they in future handle their hives instead of frames.

C. J. H. GRAVENHORST.
Wilsnack, Germany.

[Friend G., we are obliged to you for your very kind and very valuable communication. It were no more than fair, however, to say, especially as Ernest is at present absent, that to him belongs the credit of the quotation you make. Notwithstanding, however, I emphatically indorse what he says. The glimpse you give us of the way in which you manipulate your hive is to me very interesting indeed, and I can understand now, as I never did before, why it is that you prefer such an arrangement. You have got accustomed to it, and the whole process is, as it were, at your fingers' ends: and then we must admit, as you explain it to us, that there are some very important advantages indeed in handling bees without uncovering the brood-nest at all. In fact, I remember many instances where positive damage has been done by some awkward manipulator in tearing open the top of the brood-nest during cool weather, and then leaving it only partially closed up again after he went away. Nay, further, I have seen colonies get the "spring dwindling" and actually die outright (in my opinion), simply by this kind of unseasonable and unreasonable tinkering. If we don't use the same kind of hives, friend G., it is comforting to know that we agree on general principles in the production of honey.]

DOTS ON QUEENS.

SOME QUESTIONS ANSWERED.

A correspondent says that he has a few Italian queens which have dots on them, like what we used to see pictured out some years ago, while the most of his queens do not have these dots. He wishes to know whether these dots are a sign of their purity; and if not what they do denote. I do not know that I am competent to tell just what they denote; but of one thing I feel quite certain, and that is, that they do not denote purity. On the contrary, I should sooner think that they denoted impurity, for I never had a queen which showed these dots that was a good breeder as to the color of her queen progeny. If a mixed race is desired, then such queens are as good as any; but if it is desirable that a queen should duplicate herself in her queen progeny, or come anywhere near it, then such queens would have to be discarded. That we may have hybrids of the best class, it is necessary that the breeding queen should be of good Italian blood, else we can not have good hybrids. Some seem to think that good hybrids can be obtained by breeding from hybrid mothers; but so far as my experience goes along this line, the best hybrids come from the first cross between the Italians and the blacks, or *vice versa*; hence we wish a good queen, as nearly pure as possible, for our breeding mother. Where queens have many of these black dots on them, they are likely to breed queens with black stripes, which, with the Italian bee, so far as my experience goes, always denotes quite a large amount of black blood. Again, the purity of a queen can not be told by her looks. Her progeny is what tells.

Of course, if the queen is of equal value otherwise, a good-looking queen is to be preferred.

INTRODUCING VIRGIN QUEENS.

Another correspondent wishes to know how I introduce virgin queens which come to me through the mails. Well, I do not *always* do it; yet when I have suitable notice of time of shipment, so that I can prepare for them, I am nearly always successful. Young virgin queens, just hatched, can be introduced much more surely than those which are from two to six days old, as are those which come from abroad. I had an order not long ago for a dozen virgin queens; and after sending half of them, I was requested not to send more, as all had been lost so far; and this was from one of our most noted queen-breeders. Not long ago I saw, in the *Canadian Bee Journal*, something from friend Jones, on this subject, in which he said that all should know how to introduce virgin queens, or something to that effect; but after reading carefully all that was said on the subject, I failed to find how to do it explained. There are two ways to do this with oldish virgin queens, and *only* two ways, that I know of. The first (and, as I consider it, the best plan) is, to make a colony queenless for from four to nine days before the introduction is tried, then drop the virgin queen in honey, looking out that she does not fly away in getting her into the honey, after which she is to be rolled in the same, and, with a teaspoon, dipped up and turned down between two frames from the top of the hive. If the colony or nucleus has been queenless long enough to have sealed queen-cells, not one in ten will be killed, providing said colony does not desire to swarm, no matter whether the queen-cells in the hive are destroyed by the apiarist or not. In fact, as a rule I prefer not to destroy these cells, for the bees seem to rather let the virgin queen do it. If they have a desire to swarm, the virgin queen will generally be killed in spite of all precautions.

The other plan is, to take all the combs out of the hive where you wish to put the virgin, placing the queen in a cage having Good candy in one end of it, to an amount sufficient to take from 12 to 20 hours for the bees to eat through to her. By this time they know that this queen is their only hope, so will accept her, but the combs and brood must be kept out of the hive till she becomes fertile; for if put back sooner, the bees will often kill her and raise another from their brood; and they will often kill her if only combs having no brood are placed in the hive within 48 hours after the bees have liberated her. I consider the introduction of virgin queens as impractical, only as we wish to do it as a means of changing "blood." If Bro. Jones makes it practical, will he please tell us *in detail* just how he does it?

USING OLD COMB FOUNDATION.

"A year ago I put some foundation in both brood-frames and section boxes. Will it answer to use the same this year?" is a question asked by another correspondent. Well, now, I should like to say to every one who has a similar question to ask on any subject, you can tell just as well as any one; and all you have to do is to try and see. I have hundreds of questions asked me which I answer by saying, "Try it, and that will tell you." Any thing which you can try and prove for yourself, just as well as not, with little or no cost, don't run off to some one else with; for after you have tried it you will have a knowledge regarding it which will be of more value than a dozen answers to the same question. In trying these things always do it on a small scale; then if it is a failure, little harm will result; and if a success, you have

plenty of time to try again more largely. Then if it pleases you, use the whole apiary in the same way if you desire, with no fear of a heavy loss.

G. M. DOOLITTLE.

Borodino, N. Y., July, 1891.

[I am inclined to think the dots on the queens are mostly accidental, although I agree with you that they are much more likely to appear on a queen that has black blood. We have several times given our opinion that it did not pay to buy or sell unfertile queens. If one could be sure of getting them, the day they were hatched, either in the hive or some kind of nursery, they might prove valuable; but when it comes to trying to introduce those that are several days old, our experience is exactly with you.

This matter of answering our own questions has much truth in it; yet as long as these questions, when asked through a journal, tend to start discussion and bring out a variety of experience, I think to a certain extent they should be encouraged.

We, as a rule, see but little difference in foundation that is put into frames or sections a year before. Sometimes it seems as if there were a difference; at other times not, so that circumstances have probably much to do with it.]

BEE-ESCAPES—THE PORTER, PERFECTION.

JOHN S. REESE, THE ORIGINATOR OF THE ESCAPE, DECIDES IN FAVOR OF THE PORTER.

The writer, who claims to know something about the working of escapes, has now in actual use a number of Porter's spring escapes, and takes pleasure in stating that they are working perfectly under all circumstances; and the rousing big colonies clean themselves out of the supers just as quickly and perfectly as any of the smaller colonies. A Reese horizontal escape (which is very nearly perfect), worked side by side with the Porter, was badly left, as it were; and the Porter will be used in the Highland Apiary exclusively, in the future. These escapes have been left in place on top of strong colonies for several weeks at a time, and the bees seem to make no effort to plug up the springs with propolis—a very nice little vent-hole for these warm days. It seems absolutely impossible for the bees to return to the supers through the springs, so what better should we want? and it makes very little difference now who invented the bee-escape, since we have a cheap and perfect one. The most of us know who first published the principle, even if friend W. Z. H. and his big brother did laugh; the *July Review* will change its tune.

Why is it the proprietors of bee-journals don't make a thorough test or trial of the new inventions as soon as they know about them, and give their readers the benefit? It seems as if it might pay them to send an expert to the birthplace of any thing that promises good results, where they could see for themselves.

Winchester, Ky., June 29. J. S. REESE.

[Friend R., your unselfish impartiality in deciding that the Porter bee-escape is away ahead of your own is commendable, not to say praiseworthy. Would that there were more of this candor among inventors. In regard to the bee-journals testing these new things, and giving a report of them, if you will refer to our volume of last year you will see that we tested the Porter bee-escape in our own apiary, and gave a report to the effect that it was the best bee-escape, and the only one that would rid the supers of every bee; and now the reports are coming in, thick and fast, that the Porter is a grand

success in every way. The Porters certainly deserve the thanks and hearty patronage of bee-keepers for giving us a perfect bee-escape. But there is a great deal of credit that should go to J. S. Reese for popularizing the idea, although there were one or two who preceded him in the use of cones for getting bees out of the supers of comb honey. Those to whom I refer are A. E. Manum and H. R. Boardman. There is still another man who deserves much credit for helping to popularize the escape, and that is our friend of Milan, Ill., Mr. C. H. Dibbern. Now that we have a perfect bee-escape, whether there is a patent or not we hope no one will attempt to make them except the Porters. It requires considerable mechanical skill to make them perfect; and the Porters so far have given us something that is very neat, and which accomplishes its object admirably.]

E. R.

THE PORTER BEE-ESCAPE IN CALIFORNIA.

J. F. M'INTYRE GIVES HIS EXPERIENCE WITH IT.

The following is a communication sent to the Messrs. Porter, and has been by them forwarded to us, at the request of Mr. McIntyre. We are glad to publish it entire.

Messrs. R. & E. C. Porter:—I have tried your bee-escapes under various conditions, to see what they would do, and will now submit my report. In the first place, it is far superior to any other bee-escape which I have tried, and I have tried several. Being positive in its action, it will finally clear the bees out of any super, no matter how large. I find that the length of time taken to clear a super of bees depends on the kind and number of bees, and the size of the super. A T super full of comb honey will be cleared of bees in about five hours. Extracting supers with small frames like Heddon's or Dr. Tinker's are cleared nearly as quickly, say in six hours. With a full-depth ten-frame Langstroth super it takes much longer—from 12 to 24 hours, owing to the number of bees in the super. The bees seem to be more contented to stay in a large super, or else they get discouraged trying to find the way out, and give it up. Our nights are always cool here, no matter how hot it is in the day time; and if the escapes have to be left on over night, the honey gets cold, and does not extract so well. I shall use your escape to take off what comb honey I produce, and brush the bees from my extracting combs as before, while I use Langstroth supers.

Fillmore, Cal., June 23. J. F. MCINTYRE.

OVERSTOCKING.

APIARIES TOO SMALL RATHER THAN TOO LARGE FOR A LOCALITY.

Mr. Root:—There has already been a great deal written on this subject; but, of course, from the nature of the case little in the way of conclusion can be arrived at. Even recorded experiments are often misleading, because there are so many things that modify results. However, as I am very fond of reading the thoughts and experience of others on this subject, I will offer some of my own, hoping it may prove interesting to some, and awaken more thought on the subject.

My location, until the fall of 1888, was at Ainsworth, Ia.: and in the season of 1877 I thought I did exceedingly well when I got 900 lbs. extracted honey from 12 colonies, spring count, and increased to 25 colonies. In the spring of

1882 I had 60 colonies. I increased to about 100, and got 6000 lbs. extracted and 1000 lbs. comb honey. In the spring of 1886 I had 150 colonies; increased to 184, and got 19,500 lbs. extracted honey.

From the foregoing it will be seen that I got the largest *pro rata* yield when I had the largest number of bees. Of course, the larger amount of bees did not augment the *pro rata* yield, but, rather, it was my better facilities and management. But I always noticed that, when bees did well anywhere in that region, mine did as well or better, and I was utterly unable to see that my *pro rata* yield was at all affected by the number of bees I kept.

Since I removed to this place, bees have done very poorly until this season. Last season nearly all in the country died of starvation, but it was no worse in large apiaries (of which there are very few) than in small ones. This season honey is quite plentiful, and all are doing well. Of course, it is possible to overstock a given location; but when the area of honey-producing flowers is large, the apiaries may as well be large: for poor seasons do not so greatly lessen the area of pasture, or the number of flowers, as the amount of honey secreted in each little floweret. I think that bee-keepers oftener underrate the capacity of their locality than otherwise. Suppose a square mile of white clover would yield one drop per day to each square foot of land. That would amount to about 1600 lbs., or 11,200 lbs per week. Of course, this estimate may be far from correct: but has any one ever overstocked a good white-clover locality in an average season, and how many did it take to do it? From what I have seen and known of the yield from white clover in that part of Iowa where I lived, I should feel safe in keeping at least 200 colonies in one yard, and I should not be surprised if the number could be still further increased. The question is still occasionally asked—

"ARE DRONES FROM A MISMATED QUEEN PURE?"

I should say no—not any more so than the workers. Fifteen years ago I had about twenty-five colonies of blacks and one Italian. I raised lots of drones from the Italian, and suppressed those of the blacks, and queenened them all with young Italians. About two-thirds of the queens were purely mated: but as I was informed that the mismated ones would produce pure drones I let them raise them the following season, when I was astonished to find that very few of my queens raised that year were purely mated. After that I suppressed hybrid drones, and then could get about 90 per cent of the queens purely mated. Some say that

DRONES FROM A MISMATED QUEEN LOOK AS PURE AS ANY.

They don't to me. I can see that peculiar dusky luster of the black drone on some of the drones of a mismated queen, quite as often as I can see a black worker among her workers. But it still remains true, that drones from virgin queens are potent.

One season I had a number of hybrid colonies which I undertook to Italianize late in the season. I raised a lot of Italian drones late—after other drones were all dead—and then placed Italian queen-cells in each of the hybrid colonies; but before the queens got mated the weather turned cold and remained so all winter; and in the spring all of those queens were drone-layers. As soon as I discovered that, I killed them; and when the bees started queen-cells I grafted them with larvæ from an Italian colony, and thus raised about 12 queens very early—before my bees had any other drones than those from the virgin mothers. These

queens all showed pure mating, and it must have been with these drones, for there were no other Italian bees but mine in that vicinity. I thought I could notice that the queens laid a little irregularly at first, but could see nothing else remarkable about them.

BEE-ESCAPES.

I am pleased to see those improvements in bee-escapes coming forward. There are many good hives already in use. Now, if we had a perfect non-swarming race of bees should we not have things pretty much our own way? and would not those "hundreds of thousands of tons" of honey that Mr. Clute used to talk about be in sight pretty soon?

By the way, why don't some of our enterprising queen-breeders get up a strain of bees that will never swarm, but just stay at home, and work and behave themselves generally as bees should? I believe it can be done, and will be, even if I have to do it myself. I am surprised that the readers of GLEANINGS do not all know

HOW TO STICK LABELS TO TIN WITH HONEY.

Some years ago I read in GLEANINGS that a little Orleans molasses added to common paste would make them stick; and as I had none of that I put in a little honey, about a teaspoonful to the pint of paste, and found that it answered the purpose perfectly, and I have used it a great deal.

T. W. LIVINGSTON.

Dalton, Ga., June 18.

[There may be some localities that would easily support 200 colonies, but they are few. We are pretty well satisfied that our home yard has been for years overstocked. Why? Because smaller bee-keepers starting up around us soon decided that their bees didn't make enough surplus to pay them to keep them, and now every one here has given up the keeping of bees so near us. We have from 150 to 250 colonies, from fair to strong, in our locality, on the average. We do not run for honey, but for bees, and so overstocking is not as serious with us as it might be.—Yes, it is possible to do something at a non-swarming race of bees, if bee-keepers only concentrate their attention on the matter long enough. If the same thought and painstaking skill were put upon a non-swarming race of bees that there is put upon five-banded bees, we should have something practical instead of something that pleases the eye: but it's easier to breed for color than for a non-swarming propensity. It takes a whole season to tell whether the bees of a queen are non-swarming, or but little inclined to swarm; but it needs only about a month to determine the number of yellow bands on the bees of a certain queen.]

E. R.

OUR CHINA LETTER.

FRIEND WALKER GIVES US SEVERAL GOLDEN RULES.

Friend Root:—Last week I saw a carp that measured 37 inches in length, and was said to weigh about 18 lbs. It was a wild one, which had just been caught in the river. Last winter I spent a Sabbath at a mountain village where they had a score or so of pet carp in a small pond just below a spring that supplied the village with water. The carp were a foot or more in length, and a few of them were of a bright yellow, like goldfish.

Last week I also saw a dead leopard that measured 47 inches in length, exclusive of its tail, which was 31 inches long. It was a magnificent sight. It was some distance south of

here that I saw it. Now, my chair-bearers are quite anxious that I should not travel after it begins to get dark. One of them said to me, "That's what we are afraid of at night. He won't hurt any one by day; but at night he will crouch by the road and pounce on the passer-by."

And now permit me to say a few things to the boys—yes, and the girls too, who read GLEANINGS. When I was a boy I never could keep a knife. Once when I had earned money and got a new knife I spoke about this to a man who had a knife which he had kept for years. He replied, "Never lay your knife down, and you will never lose it." I followed his advice, and kept that knife a whole year. Then one day I forgot it, and it disappeared, never to be seen again. It often seems a bother to stop to shut up a knife and put it in the pocket, when I expect to use it again in a minute; but it is really a great convenience, for I never have to waste one second in looking for my knife. This man gave me another good rule: "Never whittle toward you, and you will never cut yourself." This rule is not so easy of application as the other, but it does make a difference.

Another trial to me has been in making mistakes in writing; and the worst of it was, that the more I felt vexed about it, the more likely was I to blunder. I read last year about a man who, from being very forgetful, grew to be famous for never forgetting; and he acquired the habit of remembering in this way: When he found that he had forgotten any thing, he went right off and attended to it, no matter how inconvenient it might be. This put me on the track of a rule by which I might overcome this infirmity of blundering. Now when I write I have a bit of paper handy; and if I make a mistake I stop at once and write the word or phrase over and over several times. It is making a decided difference.

I have begun to wear specs; and for a while I was much bothered by a habit of laying down my spectacle-case, and then having to hunt for it when I took off my glasses. I adopted the plan of going through the process of taking off and putting on the glasses, and putting the case in my vest-pocket several times, whenever I found that I had forgotten and laid the case down. Now when I want either case or glasses, they are right there in my vest-pocket.

One thing more: I find when I have mislaid a thing, and have to hunt for it, it always helps to pray about it. Two weeks ago I wanted to lock up the house and go away; but, lo! my keys were missing. I flurried around a minute, then stopped and said, "Lord, you know what I have done with those keys; please guide me to them." In an instant I recollect that there was a little matter that I had forgotten to attend to in a room which I usually keep locked. I went to attend to it, and there were my keys in the door. When we humble ourselves to acknowledge that we need God's help in *every* thing, we receive that help in *every* thing. God has put into this universe such an order that there is a right way of doing every thing. It is marvelous how little we can do by mere strength or by force of will if we do not work in the right way. But more marvelous still are the wonders performed by those who patiently seek out the right way. "If ye be willing and obedient, ye shall eat the good of the land."

Shaowu, China, April 29. J. E. WALKER.

[Friend W., I want to thank you for the simple suggestion in your last paragraph. Perhaps some may smile to think of praying over a matter of so little moment, but in many of the varied trials that I constantly meet in giving orders to so many people every day in my life, I have never found any help like the one you

mention. When overburdened with cares and responsibilities, if I have the presence of mind to stop and meditate, and breathe my simple prayer, "Lord, help," a break in the clouds comes sooner or later, and I get a glimpse of his loving care. Yes, it has been for *years* that I have prayed for guidance in hunting for tools, or any thing else that was making trouble. Oh, if the boys and girls, and the readers of GLEANINGS in general, old and young, could only learn this lesson of faith in prayer! And another thing that comes in with it is this: We must be living good, honest, straight, pure lives, or we have no right to expect our prayers will be answered. "If I regard iniquity in my heart, he will not hear me." So you see such a habit of prayer is a great safeguard against giving way to evil.]

A. I. R.

RAMBLE NO. 42.

IN WASHINGTON, D. C.

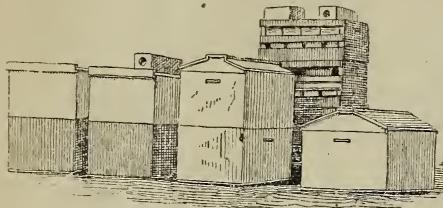
It is said that every true Mohammedan is bound to visit the tomb of his prophet at Mecca at least once in his lifetime. So I believe that every true American should visit the national Capitol at Washington. To view the city from which so much of our national history has emanated, and walk the streets that, in all the past, have in their time reechoed to the footsteps of our great men causes the blood to flow with more patriotic fire, and gives the citizen a resolve to do his little toward making a government for the people instead of for the favored few.

The Rambler, being greatly favored by the force of circumstances, was not a little surprised to find himself in the national Capitol on April 7th last. I left the cold and cheerless atmosphere of my northern home, where now and then a good amount of snow could be seen, and the accompanying shiver could be felt, and found here the green grass, the budding trees, and the fragrant magnolia coming into bloom. The change was invigorating; and all the eye saw and soul felt could not be properly put upon paper.

Washington is of interest to the bee-keeper, for here have centered the hopes of thousands of bee-keepers; and as their papers for a patent were issued from the Patent Office, it has been received with reverence as the stepping-stone to fortune. How few have realized that fortune is well known to the fraternity! Still, we are not one of those who would destroy our patent system, but believe that, under its fostering influence, the inventive faculty has been stimulated as under no other system. Our belief was greatly stimulated by the testimonials of hundreds of inventors who, at the time of our visit, were celebrating the centennial of the Patent Office. Their words were full of meaning when directed to the past 100 years, and still more pregnant with prophecy when directed to the future. The celebration will greatly strengthen the patent system. Mr. Callamer is at the head of the bee-hive department, and is thoroughly posted upon all matters pertaining to bee culture. I think he made the remark, that no patent that had been granted upon beehives had been successfully overthrown. Mr. Callamer has been in the Patent Office for 25 years, and patents on hives and fixtures have been quite numerous; but at present there is a decline in quantity.

There are a few bee-keepers in the city of Washington and suburbs. The most enthusiastic of these is Mr. F. Dauzenbaker. Mr. D. will be remembered by the readers of GLEANINGS as the inventor of the Dual hive, and the

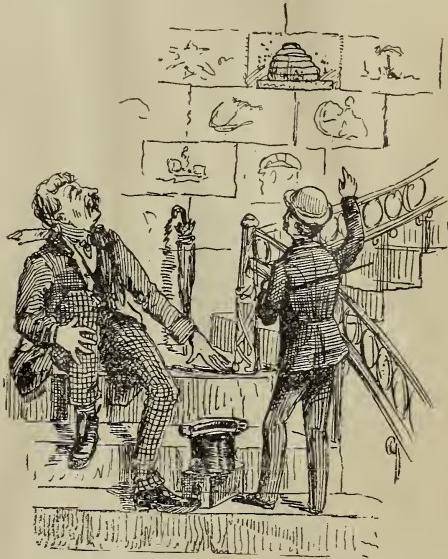
first to use the Dovetailed corner. He has given his hive and system much thought, and thinks he has it about to the point of perfection. Certainly it works well in his climate, and there are many points in the hive that accord with the Rambler's experience, and other points that must be tested. The making of the hive of thin lumber, both inside and outside cases, and using a paper packing, are improvements in the right direction. The use of thick top-bars to the brood-frames, a $\frac{1}{16}$ -inch bee-space, and a heat-retaining cover at all times, gives the best results we ever saw in relation to the building of brace-combs and daubing of propolis. A $4\frac{1}{2} \times 4\frac{1}{2} \times \frac{3}{4}$ section is used upon this hive, and Mr. D. claims that such a section sells better than any other in his market. His apiary proprietor is in Virginia, on the Blue Ridge, 60 miles



DANZENBAKER'S DUAL-HIVE APIARY.

from Washington, and in one of the best honey-producing regions of the country. Mr. D.'s system of taking comb honey is a little different from late methods. His clamps look like the old-style 12-lb. box, but this box of very thin veneer contains the sections. Three clamps are placed upon a hive; and as the center one is filled first, it is removed to the outside when nearly full, and an outside one placed in the center, and so the relation continues through the season. The hives and frames are made to fit to the hundredth part of an inch, and every little detail has been carefully worked out by the inventor. The hive is not so well adapted to the production of extracted honey as for comb. Mr. D. is one of those men who believe that our honey crop can be and should be wholly produced in the shape of beautiful comb. The

those beautiful Washington parks. The real-estate business now largely occupies his attention; and from the amount of property the sale of which he was negotiating while I was in Washington, and the profits arising therefrom, the Rambler was inclined to think that, while the bee-interests had a strong hold upon him, there are but few men who would hang on to a business that is profitless when compared to the



AN INSPIRATION.

more profitable line of work. But the secret probably lies in the fact that Mr. D. entertains Senator Peffer and Pres. Polk, of the Farmers' Alliance, and is in cordial sympathy with their views, and is in some fear of too soon becoming a "bloated bondholder." Mr. D. believes that the farmers should rule this country, instead of the aforesaid bondholder, to which the Rambler is ready to say amen.



A SHAKE WITH THE PRESIDENT.

hive can, however, be modified to suit the demands of the honey-extractor. Mr. D.'s city apiary was of small dimensions, and is located in the basement of his house. He lives in a beautiful residence on K St., fronting one of

A stroll through the markets of Washington revealed the fact that it was quite bare of honey. Mr. Hoops, a bee-keeper, had a market stand, and sold much honey. Samples of alfalfa honey were shown; but the quality was

somewhat inferior, and had a taste of New Orleans molasses. Mr. Fish, also, had a stand, and had sold 3000 lbs. of honey. A peculiarity of this market over any other is the custom of cutting out the comb from the section, and placing it in a paper box. If the section was fitted to the edges it was seldom cut out; but if partly filled, or there were a few empty cells, the customers stood by and saw it cut out and weighed. Mr. Fish also sold pickles and sour-kraut, so we see the extremes meet—the sweet and the sour. Fashionable turnouts were around the market all the morning hours. It is the custom here for the fashionable and wealthy people to do their own marketing, and it is no uncommon thing to see the wives of cabinet officers in the market, selecting their produce for the day.

I might take much of your time in describing the many interesting things I saw in Washington, but I will forego the temptation at present, with the exception of one incident—the climbing of Washington Monument, 500 feet. This was an arduous journey. At the height of about 300 feet weariness overtook the Rambler, and he was about to give up when Mr. D. pointed to a bee-hive carved in stone. That gave us a new inspiration, and the journey was finished with vigor. The stone bee-hive is the coat of arms of "Deseret," and I hope it will inspire many other bee-keepers who travel this road.

The meeting with President Harrison was very cordial on my part. I expected he would say something about the McKinley bill keeping out queen-bees, but he said not a word—didn't even ask about our postmaster. There was nothing cordial about his shake—just a grab, and a hint to get along so as to give him a chance at the next fellow. My umbrella interfered a little with the proceedings, and the big prize-fighter at the right of us began to work his muscles, and I bade Pres. Harrison an affectionate good-by. These shakes for a second presidential term do not please the RAMBLER.

NUBBINS.

FROM PROF. COOK.

Please ask Dr. Miller to wait a little before he comes to take lessons on the rearing of queens in the Doolittle cups. Our last gives eighteen good capped cells and eight destroyed. In some cases all, or nearly all, were destroyed. Our students are now trying the Doolittle method. They have some success.

The Chapman honey-plant is a fraud. Our plants, self-sown two years ago, are weak and of little account. We have two fine fields of rape and three of sweet clover. Our Rocky Mountain bee-plant has failed again. This plant will never pay to plant, except to throw about in waste places. This should be done in August or September, to secure the best results.

I am not a chemist, but have no doubt that beeswax can be distinguished from either ceresin or paraffine. Not only is the composition somewhat different, but the texture and strength are not the same. We shall soon have these matters (purity of honey and wax) worked out by our Experiment Station. We are only getting a good ready. I wish some Wisconsin bee-keeper or some other would furnish me some basswood honey, say two pounds, where the honey was gathered very rapidly—say 15 or 10 pounds per colony in a day. I have special use for it.

Our reversible frames are not working well. The bees are filling in on the sides below with honey. They never did this before. "One swallow does not make a summer."

The honey-dew is coming from several trees. Lice are very common, and the secretion equally so. Bee-keepers must look out.

I should expect no harm from eating poisonous animals like *centipedes*. Even the venom of the rattlesnake or copperhead is harmless if taken into the stomach, though deadly if injected directly into the blood.

We, too, are among the fortunate ones, for Rambler is spending the "Fourth" with us. As he comes from so many bee-keepers it is like a visit from the whole fraternity. A. J. COOK.

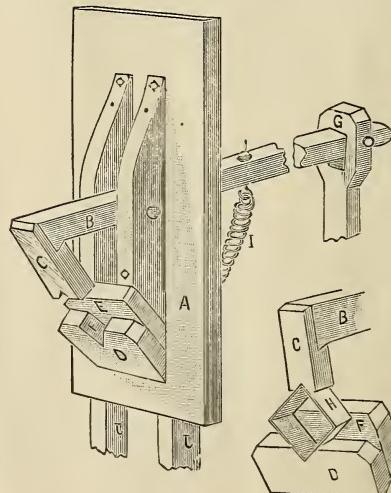
Ag'l College, Mich., July 4.

[There, friend Cook, I am very glad indeed to have you come right out and pronounce the Chapman honey-plant a fraud, so far as raising it for honey is concerned. You know I stood almost alone in objecting when it was first lauded so highly; and I don't know but I incurred the displeasure of many of my best friends in so doing. The same is true with the Rocky Mountain bee-plant; and just think how certain catalogues have boomed it!—Tell me when your rape and sweet clover are yielding honey at their best and I will come and see them.—Your caution in regard to honey-dew is well timed, and there is great need of looking out.—I am glad to hear you say that centipedes are not poisonous when eaten by accident; but I infer that you have had no such case come under your observation.]

KUEBLER'S SECTION-FORMER.

ANOTHER WAY OF DOING IT.

To-day I send you a model of a section-press worked by the foot. I made one the same as the model a few weeks ago. I have put up a lot of sections with it since. It worked admirably. If you find the press has any advantage over other presses, will you please describe it in GLEANINGS for the benefit of our brother bee-keepers, as the press is easy to make? I have kept bees over 15 years, and have taken GLEANINGS for a number of years. I know how much



KUEBLER'S SECTION-PRESS.

trouble it is to put up a lot of sections with the hammer. The press can be bolted to a bench or table.

CONRAD KUEBLER.

Calamus, Ia., June 12.

[We had our engravers make a picture of

your model. The engraving is so complete that a description is almost unnecessary. It has, no doubt, advantages over some others that have been illustrated. These section-formers are of the greatest assistance, and are vastly better and more rapid than the mallet or hammer.]

E. R.

HONEY-DEW, AGAIN.

BUGS AND BEETLES.

Mr. S. E. Miller, Bluffton, Mo., sends me leaves of walnut, hickory, and oak which are thickly covered with plant-lice. He says these latter secrete so much honey-dew that the bees fill their hives in a week or ten days. He wishes to know whether they will continue to secrete the nectar, as he would like to make up in quantity what this lacks in quality. Mr. Miller sends one louse with wings, and asks if this is the mature louse. The plant-lice are very thick this year. I find our bees are working on the same trees (hickory, walnut, and oak) that Mr. Miller's bees are finding dripping with nectar. From my correspondence I think this year, 1891, will be known as the "honey-dew" year. The honey here, as yet, does not seem to lack in quality. We have never had on our table honey that pleased us more than some we have just received from our apiary. True, it is mainly white clover, but not all. There is a flavor about it that is superb. Of course, I can not say that that comes from this aphis secretion, but I think it must, as I can conceive of no other source.

The winged lice are no more mature than the wingless, or apterous, ones. There are several generations of plant-lice in a season, and they increase so rapidly, and are so ruinously destructive to the plants on which they live, and from which they suck, that, were they not able to migrate, they would soon destroy all vegetation on which they feed, and then die themselves. But their strange natural economy prevents this total destruction of plant-lice and their own suicide. After a few generations there comes a winged generation which flies to pastures new, and thus their lives are preserved. Sometimes they go to an entirely new plant, as the plum-louse goes to the hop, and the grape-root louse to the leaves.

Mr. M. asks how long the lice will remain. This, no one can tell; for no one can tell of their enemies. Sometimes parasites will destroy the lice in a few days. Just now a little braconid fly, *Aphidius granulariphis*, is destroying the myriads of wheat-lice, so that the latter, despite their rapid increase, will soon be almost exterminated.

As I have said before, bee-keepers should be very watchful of their honey, and see that no serious harm comes from it. If good and wholesome, it is all right; if strong and rank, it should be kept from the sections or any good honey that may be in the hive.

THE BEE-STABBER.

Mr. Wm. C. Peterson, Canaveral, Fla., sends me a fine large bug of which he wishes to learn more through GLEANINGS. Of it he writes: "I caught it with a honey-bee on its long proboscis. The bee was dead, and Mr. Bug was walking off with it as demurely as you please. I have seen one other with a bee which was captured while I was looking at it. The bug stabs the bee, which causes almost instant death."

This is in substance what Mr. P. writes about this bee-killing bug. He speaks of it as a beetle, which is a mistake. All beetles have thick wing-covers, called "elytra," which sheath the

under wings. In bugs, only half of these upper wings are thickened; hence the name of the bug order, *Hemiptera*. Again, beetles have strong jaws which move sidewise, so a beetle bites much as would a turtle, only the jaws do not move up and down. On the other hand, a bug has a beak, or proboscis, which is strong, and used to suck. Thus a bug does not bite—it stabs and sucks.

This bug is described and illustrated in my Bee-keepers' Guide, p. 422, where I call it the "bee-stabber." The scientific name is *Euthyrhynchus Floridanus*. I also illustrate the strong four-jointed beak, which looks no more cruel than it is. The bug is about half an inch long, purplish or greenish blue in color, with yellowish or reddish orange spots. I have had this bug from South Carolina, Georgia, and Florida. The name indicates that it was first discovered in Florida. It certainly does much good in killing noxious insects; and I hardly think it should be condemned for its attack on an occasional luckless bee.

I have a fine large black ground-beetle, received from Mr. S. W. Taylor, Harveyville, Pa. Mr. T. says he found this culprit actually engaged in the act of carrying a live bee out of the hive. He has courage at least. This belongs to the great family of ground-beetles, *Carabidae*. Nearly all are black. They are quick, have long legs, and so are good runners; and, when alarmed, seek to escape danger by running rather than by flight. They live in the ground, or under stones, logs, under bark of old trees, etc. They are all predaceous, both in the grub (or larval) and imago (or mature) stages. Thus they do immense good in killing cutworms, white grubs, etc., etc. This one rather oversteps the bounds of genuine usefulness; but from the generally good reputation of the family, the courage of this one, and the fact that even he doubtless did far more good than harm, makes me slow to condemn him. I think this is the first record we have of a carabid beetle preying on the honey-bee. Who will discover and send on the next rarity? A. J. COOK.

Agricultural College, Mich.

WHAT TO DO WITH WEAK COLONIES IN THE SPRING.

A SHORT CUT IN BUILDING THEM UP.

Perhaps my method of handling the swarming business will be of some use to some of the readers of GLEANINGS whose bees will persist in swarming, and who find their crop of honey curtailed by the same. Unless the season is an exceptional one it does not pay to build up weak colonies in the spring, at the expense of the stronger ones. Let them get what brood and bees they can; and when swarming commences, hive the first swarms in these, saving the queens, which introduce into the colony from which the swarm issued, next day. The three or four combs of brood, supplemented by a couple of combs of foundation, will usually be very acceptable to the swarm, and the work-bees will be a valuable addition. Put on the sections, and your honey crop will be scarcely diminished. Introduce the queen in 24 hours, after removing all the cells and smoking bees thoroughly, by turning her loose on the combs, and this also will soon have a full working force again. After all weak ones are treated in this manner, hive the next swarm on the old stand on half the brood-combs and the rest on foundation, or empty combs. Put the brood taken out where it will not chill, and hive the next swarm that issues with this swarm, catch-

ing the queen as she runs in, and return her and the brood taken out to the hive from which her swarm issued. If she should not be caught as she enters the hive, she will usually be found balled on the bottom-board inside of the hive, where she is easily caught. All who have hived two good swarms together during a honey-flow know what honey they will gather with their enormous stock of workers, while the stock to which the queen is returned and brood given will be a rousing colony again in a few days—one that may store a large amount of honey. By this method a comb of brood can be taken here and there for forming nuclei; it does away with the after-swarm nuisance; prevents all increase, keeps all colonies strong and with a laying queen, and scarcely if at all diminishes the surplus. After the flow is over, weed out all poor queens. Bees are booming at date.

Baptistown, N. J., June 18. W. W. CASE.

[Friend C., there is certainly wisdom in your suggestions. In fact, where one does not want increase, and has quite a number of weak colonies, I do not know of any better way of managing.]

BEE-ESCAPES AND CLOSED-END FRAMES.

CLOSED-END FRAMES IN A TIGHT-FITTING CASE NOT PRACTICABLE, AND WHY.

In my last article in GLEANINGS, page 510, I said that bee-escapes did not work with me. Since that time I have received some of the new Porter spring escapes. I used them nearly every day during a month or more in comparison with the Dibbern and Reese escapes; and now my opinion on bee-escapes is entirely changed. If the Porter escape is adjusted to a hive, the super will be practically freed of bees during the night, every time, if no brood is in the super. In fact, many times I had not a single bee left in the super.

To work quickly with the escape-board, we give the super with the just extracted and now empty combs at the same time, when the escape is adjusted to the hive in the evening. All unnecessary lifting is avoided thereby, but we need an extra set of supers with empty combs. If two hands work together, one lifting the supers while the other sets on the empty super and the escape-board, the whole work takes very little time. The supers to be extracted can be taken off at any time during the day, when they are needed.

In out-aparies it is somewhat more difficult to use the escape-boards with advantage, and I do not know as yet of a practical way. To adjust the escape in the evening, removing the supers in the morning (the best plan for the home apiary) takes two different trips to the same out-apairy; and a few hours in the morning are not sufficient to free the supers of all the bees. As yet I use in my out-aparies something similar to Dr. Miller's escape-tent, but made of wooden framework, and covered with wire cloth.

My opinion is now, that the Porter escape will very much lessen the work of taking off honey. This escape is much ahead of all others, because no bee can get back into the super. Even if some brood is there, the most of the bees will escape, except quite young ones, which never leave the brood, and which can't take wing at all. These young bees, if brushed through a funnel into any box, will be accepted by any colony, and can be used to strengthen small colonies or nuclei.

On page 543, Mr. Lester Judson and you (E. R.) say that closed-end frames in closely fit-

ting hives are not a practical success, at least not in a hive as deep as the Doytailed hive. I used these frames and hives this season, at first opposed to them; but I prefer them now to hives with swinging frames or with Hoffman frames. You have given no reasons for your opinion, and I can't see any. I can handle these frames quicker than the common hanging frame, and as fast as the Hoffman frame, and kill no bees. If in some years the propolis will not make any trouble, and many apiarists of reputation, among them yourself, say that this will not be the case, I will not use any other frame: that is, if I need fixed frames. So far my experience with these frames and hives leads me to the idea that the new Heddon hive may not be so bad after all, and very probably I shall try some of them next year.

What a queer change of opinion! About a year ago I was opposed to these frames, and you told us of their great advantages; and now I have got used to them, and found out their advantages, and you say, "They are no practical success."

L. STACHELHAUSEN.

Selma, Tex., July 8.

I felt quite certain that you would reverse your opinion when you tried the Porter escape. Its conception is a great stride in advance; and the conservative bee-keeper who *won't* try it or *won't* make it work is going to lose something.

Regarding those closed-end frames, I see you do not quite understand me. They are a magnificent success as used by Hetherington and Elwood; but when they are used in a tight-fitting box I have my doubts about them. Frames as shallow as the Heddon will work. I know; but when we increase the depth of those same frames we encounter a difficulty. Did you never have a bureau-drawer stick or draw out by "hitches"—that is, catch on one end and then on the other? Well, if you never did it is because you live in a climate so dry that bureau-drawers don't swell with moisture. I trust you see the application. Closed-end frames in a tight-fitting case must not have a play of over $\frac{1}{8}$ inch, or more than $\frac{3}{16}$. Why? If more, the space will be great enough to roll bees over. If $\frac{3}{16}$ inch is just right, what is the trouble then? It can't be maintained in most localities, on account of moisture; and, besides this, unless there is *perfect accuracy* of workmanship the frames won't go into the hives. Those we sent you, and others, we made with great care, knowing its importance; but because these frames would be put in other hives than our own, and because of the shrinking and swelling in many localities, we felt that we could not conscientiously continue to recommend them. Let there be a variance of even $\frac{1}{8}$ of an inch in the length of the hives, and there is trouble. Among the supply-dealers there are some who do not work to the same gauge in Langstroth size of hives: and add to this some inaccuracies of manufacture, and you will see the point. Now, if all L. hives were of *exactly* the same length, and if wood would not be affected by dampness, I think there would be no fixed frame equal to the closed ends in a tight-fitting box. When all the conditions are right their manipulation is pretty, and they would kill no bees.

I will add one more word about this swelling. Last spring, when we took our Heddon hive from the cellar (a dry one) the end-bars and the ends of the hives had been so swelled that the frames were immovable. After it had been outdoors, exposed to the sun for a while, there was no trouble. For the benefit of Mr. Heddon I will remark that I don't think there would be serious trouble with shallow close-fitting frames

if the climate is suitable. You see, the point is here: The deeper a close-fitting frame is, the more there is of that tendency to "hitch" in pulling out the frames, as was explained in the case of the bureau-drawer. The only satisfactory way to use deep closed-end frames is to have them *a la* Hetherington.] E. R. R.

A REPORT OF TWO QUEENS FROM IMPORTED STOCK.

EXPERIENCE OF A BEGINNER.

Last summer I bought two untested queens of you—one in July and one in August. They both proved to be purely mated, both good; but the one received in August was extra good. I have raised 20 young queens from her. They are all as large or larger than she is, and two of them are the largest, finest-looking queens I have ever seen. Are the largest queens always the best?

The two received from you came after the honey-flow had passed. I had to feed the colonies they were introduced to. They came through the winter all right. From the 10th of April to the 15th of June I took 7 frames of capped brood from each one of these Italian colonies, to reinforce blacks; and although I have drawn so heavily from them they have built ten Simplicity frames of new comb, and filled them full of honey. I think if I had taken no brood from them they would have filled three Simplicity stories—ten frames each—chuck full.

The first two queens I raised were out before I had any Italian drones, and they are now two magnificent colonies of hybrids. I have never used a veil, and don't often use a smoker; but I think these hybrids will bring me to it. I went one morning to hoe some weeds down in front of one of their hives before the bees got to stirring. The hoeing woke them up, and they were getting excited. I was anxious to get the weeds out of the way. I made a big lick to get the last weed (there was a little stick in the way), and the hoe glanced and struck the corner of the hive. Then they poured out. I was bareheaded and baldheaded to boot. One got on top of my pate, one on my ear, and one got his business end in contact with my proboscis (it was big enough before); several got tangled in what little hair I had left; several more in my beard, and I made a very undignified retreat. If I had been in reach of a veil, oat-sack, or one of Miss Emma Wilson's aprons. I would certainly have wrapped my head up. By the way, I owe Miss Wilson a vote of thanks for her plan of putting foundation in frames—GLEANINGS, page 466. I owe Dr. Miller several votes. I have several good ideas from him; Doolittle and others too.

The Italian bees are a long way ahead of the blacks.

PACKING FOR THE SOUTH.

I like your idea of chaff packing. Friend Jenkins says, in his catalogue, that "chaff hives are not necessary in the South;" but I think it pays to pack bees up snugly for winter, even here. The strongest colony I had this spring was a swarm hived in a large soap-box last June. The box was turned bottom up on a plank laid on the ground. In October they were packed up like a heap of potatoes, except a little passage for them to come out. They were not fed nor disturbed till they were transferred in April. They never felt the cool nights. Most of the others standing out in the yard were weak. They had been fed too. The soap-box was booming without any feed.

Fayette, Miss., June 26. I. N. BEDFORD.

[Largest queens are not necessarily the most prolific, though they are usually regarded so.]

THE HOUSE-APIARY, AGAIN.

THE POSSIBILITIES OF THE BEE-ESCAPE.

Permit me to say a word from my experience with the Reese bee-escape placed in the bee-house, as you will observe by referring to page 990, 1889. After reading E. R.'s short experience in this line on page 561 (1891) I am not surprised at the facts he has given. I have often wondered why it was that persons abandoned the house-apairy. Well, since reading E. R.'s article I presume there was good reason; and as I have always used the escape, and never had any inconveniences from bees in the house outside of the hive, it ought to be a good reason why I thus pondered over the problem.

I have frequently seen articles condemning house-aparies, and I frequently thought of writing you for the reason; but, thanks to E. R. for the explanation. I want to say that any one having a house-apairy can, by putting in a two-inch hole, with the cone bee-escape just over each hive, henceforth continue to call blessings down upon the inventor of that most valuable gift, the bee-escape, to the bee-fraternity.

In my article on page 990 I did not say anything about inside manipulation. I have an abundance of light from a revolving window in the south end, sufficient to catch a queen, see eggs, or for any work; also blinded when not at work. Of course, I use a spring blind. To be handy, the ventilator, or escape, above, carries the smoke away at the roof; and the cone escape—why, it's just grand. Put them on over a three or four inch rim, and the crate on top in the evening, and in the morning no bees, or scarcely any, are found in the crate. If any, they are quite young. Yes, the escape works tiptop in the house, and I want to predict the most pleasant manipulation of bees you have ever enjoyed in your life. If you thus arrange your house-apairy, however, you must not forget to have plenty of light while manipulating or looking for queens and eggs. The spring blind is the handiest, and most convenient in working the house-apairy. I use so little smoke one would hardly perceive it, and the ventilator draws it away when you are not using the smoker. One thus working with the house-apairy does not or can not know what robber bees are to a certainty—at least, that is my experience.

J. A. GOLDEN.

Reinersville, O., July 10.

COMB SOMETIMES PRODUCED WITHOUT LOSS.

RUNNING OUT-APIARIES ALONE.

Several days ago I noticed a colony hanging out some. It was not a very warm day, and they were under a tree, so the sun did not strike them except for a short time in the morning. I did not have time to look after them until late in the afternoon. By that time there was a fair-sized swarm hanging in front. I found the upper story full, and no signs of swarming. I took out half of the combs above, and gave empty frames instead. They went in, and by next morning had several good-sized pieces of comb, and they built those frames full in a very short time. Now, I think if I had given them foundation, or extracted the combs and returned them, that wax would have been wasted; and that, under such conditions, wax is involuntarily produced. I find, during fair weather or a good honey-flow, by keeping about

two empty frames in my upper story for extracting over good colonies, I get about as much honey as though they were not building comb, and they seem much better contented—not so liable to swarm, and I have the combs to help fill the upper story of new swarms.

I read friend Manum's article in April 15th GLEANINGS with much interest: but I am afraid he will get "stuck," or perhaps some one with less experience will try to follow the same plan with his out-apiaries, and will get so much on his hands that he will pretty emphatically wish for some help. A little of my experience may illustrate one difficulty that may come up. This spring I have my home yard and a yard four miles away. I planned to visit the out-yard once a week, and divide every colony that showed any sign of swarming. My home yard built up very strong, and swarming commenced. All went according to plan for a while. Then the weather got so that, for some days, the bees could work only an hour or so; this continued several days, bees swarming all the time, as there was plenty of honey when the bees could work. Of course, with my two yards and some one to stay at home, I did not lose many. One cool day after working at the out-yard, I got home after dark and found my wife had three swarms clustered together on both sides, end, and bottom of a two-story hive, while the day had been so cool that bees had worked only during the middle of the day. Then we had a cool spell of four days, with frost three nights. The first and fourth days the bees flew some; the second and third days, the yard looked like winter—hardly a bee stirring, as there was a cold north wind: and on the fifth and sixth days swarms issued. Now, if I had had more than three yards, even if I depended on dividing, I must have lost more or less swarms, as the weather would not permit of working with them, though the swarming-fever kept up.

IS THERE DANGER OF FERTILE WORKERS?

In making colonies hopelessly queenless to prevent swarming, I should be afraid of fertile workers taking possession; and a colony without queens, or means of rearing one, is of very little account for work with me; and this I am afraid would be a greater loss than to raise bees by having a queen with them, though it may work all right in certain localities.

Port Orange, Fla., May 11. JOHN B. CASE.

PROSPECTS POOR IN MISSOURI.

HEDDON'S SHAKE-OUT FUNCTION, AND HOW HE DOES IT, AS TOLD BY ONE OF HIS STUDENTS.

We have no honey yet—too wet and cool. Bee-men around here are wearing long faces, but hope basswood will yield. All we shall need, I think, is good weather. The trees seem to be loaded down with buds. Mr. L. W. Baldwin says there's only one chance in ten of getting any honey from basswood. His brother Phidel says this is the 10th chance. I really hope it is. But this is the fifth year I have been here, and I have yet to see much basswood honey—that is, any thing like the way it yields in New York; so you see our main dependence is white clover; and when that fails we are "up a tree."

GETTING USED TO A THING.

Friend Ernest, you are just talking when you quote about "getting used to a thing." Will you please allow one of Mr. Heddon's students to just inform you how Mr. H. would proceed

to shake the bees out of one of his shallow brood-chambers? For instance, if he simply wants to find the queen, he seldom shakes them at all—just lifts the cover, and gently puffs a little smoke down the frames, then lifts off the brood-chamber, and, in the majority of cases, the queen is on the bottom-board; if not, gently shake them over the bottom, and the queen will drop off, as she is heavy, and can't cling as well as the workers. But when shaking out of the extracting supers you want to shake them "all-fired hard."

When I came here to work for Mr. Phidel Baldwin, in 1887, they all used a mouth smoker—merely a tin tube, with corn silk for fuel; but he bought a Bingham "for me;" but when I bought bees in the fall, and started for myself, I offered to take the Bingham off his hands; but, no; he had "got used to it." Since then I have got so used to the mouth smoker that I use it considerably. Strange, isn't it? Perhaps Mr. Heddon will remember who it was who wrote in an article a few years ago, that "the man who *never* changes is a humbug." I used to laugh continually at Mr. P. Baldwin about his side-opening hives, and now I think he has nailed every one fast. "Don't want a hive to tumble to pieces when he picks it up." But I am thinking of making my hives side-opening.

S. A. UTLEY.

Mt. Washington, Mo., June 20.

[There; I am glad you have told us about that shake-out function. I shall try it again, for you have given me a new idea on the method of shaking. Yes, for extracting supers I should think you would have to shake "all-fired hard." Say, don't you use side-opening hives or you will regret it, as they nearly all have done. Use a hive a trifle wider, and then pull out the follower to get the "function" of a side-opener.]

E. R.

LADIES' CONVERSAZIONE.

RECORD-BOOKS.

HOW DR. MILLER KEEPS THEM.

You ask, Mr. Root, for some information in regard to the way we keep our record-book. Now, I have been wanting to write on that subject. I can hardly see how any one who has many bees can get along without a record-book, and I haven't the least doubt that others who keep their records by means of slates, bricks, etc., can't see how we get along with a record-book. I think the first remark Mr. Root made was something like this: "Suppose you lose your book." We replied, "Yes, but we don't lose it. We never lost one yet." In the first place, the book is rather large to lose easily; and, secondly, it is so constantly in use that it has not much time to get lost, as we take the same book to each apiary. We could not get on very well without it.

Some one may say, "Suppose you forget it when going to an out-apiary. What would you do then?" Well, we might have to go back after it. But to avoid the possibility of such a thing, we have in the back of our book a memorandum of such articles as we might wish to take with us, such as hats, chisels, smokers, shavings, etc., and have made it a rule that that memorandum must be read after we are in the wagon, ready to start, to make sure that nothing is left. Of course, we must have the book to read it, so the book can never be forgotten. I don't think we should ever get very far

without it in any case, as Dr. Miller usually reaches for the book before we have gone far. Then he looks over the record for the whole apiary; and by the time we get there he has our day's work planned. Those colonies that must surely be seen to are done first; then in case a shower comes up, or any thing else interrupts, the most important ones are done.

We can pick up our record-book, turn to any colony we have, whether in the out-apiaries or at home, and tell the condition of affairs, and it is often very handy to be able to do this. For instance, suppose you have a number of queenless colonies in one of your out-apiaries, and extra queens at home; all you have to do is to take your book, find out how many queens are needed, put them in candy-cages, and take them with you.

One advantage the book has over other methods is, that you can refer back five or ten years, as we keep all our books. A great deal of our planning and deciding what to do with our bees—in fact, the most of it—is done away from the hives, at a time when we are not able to work, and our record-book is most faithfully studied.

In making our records we abbreviate as much as possible. I will give some of the abbreviations used; *cl q* (clipped queen); *dyc* (destroyed queen-cells); *eg* (eggs present); *svq* (saw virgin queen); *gybr* (gave young brood); *t2br & b* (took two frames of brood and adhering bees); *8br* (the colony has 8 frames of brood); *sqc* (sealed queen-cells); *keq* (destroyed eggs in queen-cells); *qh* (queen hatched), etc. You can readily see we take very little space for our records—very little time to make them or read them. Our book is about 12x6 inches, contains 180 pages, and costs 25 cents. You hardly need so large a book; but it is very nice to have a few pages for miscellaneous entries, such as date of first clover-bloom; when bees were taken out of cellar, etc. It makes interesting reading in later years.

EMMA WILSON.

Marengo, Ill., July 6.

A PROTEST FROM ONE OF OUR WOMEN-FOLKS.

Friend Root:—I have a crow to pick with you. I don't think you half treated us right in your answer to the complaint on page 517. You have there made it appear to the readers of GLEANINGS that no one can send queens by return mail unless he charges a dollar—or, no one but *you* can do so. Now, I have sent over three hundred queens this season, and all have gone by return mail when requested. You have overthrown our advertisement, and still we have you to pay. I can send queens by return mail at 50 cents just as easily as you can for a dollar, as long as they last. But, of course, I should not make as much; and at the same time my queens could be just as good as yours. I hope you may see the point, and correct it.

JENNIE ATCHLEY.

Farmersville, Tex., June 27.

[Well done, my good friend Jennie. I suppose you see that, by publishing your letter, we have redeemed ourselves from a large part of our charge, for we have given you a tiptop advertisement; and if you have filled all orders by return mail when so requested, you have done better than anybody else I know of in raising queens. If you will refer again to what I said in regard to raising queens for less than a dollar, you will notice that it is not quite as you state it. In fact, your own statement above settles the question. Queens can be raised so as to make it pay, for only 50 cents each. Hold on! your experience does not prove that a *man* can do it, but only that a *woman* can. Now, then, if our queen-breeders do not

look out we shall be in a tight place. The only point I wished to make in what I said was this: That there is no advertisement in the world that can equal prompt habits in business; and I judged that the reason why we had so many orders while we charge a dollar, was because of our promptness in shipping. One of our mails comes from the office, and is opened after four o'clock; and the mail train passes our doors at 5:15. Well, we manage nowadays to pick out all the queen orders from this four-o'clock mail, and get queens on the train at 5:15. It makes us skip around lively to do it, and I am afraid that I sometimes "yank on the lines" a little when the queens there on the table do not go off on this evening train. If I have inadvertently not treated any of our advertisers right, I shall be very glad to correct it.] A. I. R.

HUMBUGS AND SWINDLES

A FRAUD.

Brother Root:—I wish to call the attention of your readers to a fraud or swindle. It is the Kaweah Coöperative Colony, of Kaweah, Tulare Co., Cal. It is being advertised considerably all over the U. S. as well as in England and Germany, and other countries. I have recently thoroughly investigated its workings and management, and do not hesitate to brand it as a base swindle. Many of its members have put in one hundred to one thousand dollars, and one to five years' work—hard work—and can not get a ten-cent meal out of their "time-checks." I have a host of plain facts and figures—reliable documents and indisputable evidence—which I will gladly give to you or any other publishers who will give the space in their columns. To one and all, I say, don't be misled by their scheme. If you do you will surely lose your money. All inquiries cheerfully answered.

J. G. GILSTRAP.

Last, Fresno Co., Cal., July 1.

[That is right, friend G. Show them up. In these times, when there is so much truth in the familiar saying that "farming does not pay," and when a good many other things, by the way, do not pay either, it seems a little sad to think of the amount of money that is scraped up to support blacklegs and swindlers. The Bohemian-oats fraud is pretty well killed out; but the same spirit is not killed out by any means; and pretended co-operative institutions are being worked all over our land to swindle those who can be drawn into them. It is well, as a rule, to be careful about investing in any new enterprise that suddenly springs up, especially if it has a high-sounding name. Several things of that sort have recently been worked in our own community. One in particular claimed that everybody who put in his money could get from 12 to 15 per cent interest, and they went through a lot of figuring to demonstrate to an absolute certainty that there was no possible hook or crook about it. The absurdity of such proposals ought to be plain to every reasonable man or woman. Put it in this way: If they can pay 12 to 15 per cent interest, why in the world don't they go and get money at from 6 to 8 per cent? Well, they have a sort of excuse to make by saying that their business is planned to "help poor people." By the way, friends, you had better give a wide berth to any new enterprise that proposes any thing of the sort; and if you have money to invest, put it into the hands of somebody whom you know personally—some one of undoubted integrity.]

OUR QUESTION-BOX,

With Replies from our best Authorities on Bees

QUESTION 189. *I am a farmer with no knowledge of bees. Is it better for me to buy my honey or to keep one or two colonies of bees and raise what I need?*

If you could give them the proper care, keep the bees by all means; if not, buy your honey.
Ohio. N. W. H. R. BOARDMAN.

It is the easiest job in the world to buy, providing one has the money. But a good farmer should buy nothing which he can raise.
Ohio. S. W. C. F. MUTH.

If it is for the sake of honey only, then buy it. If to this you can add a special liking for the care of the bees, then keep the bees.
California. S. R. WILKIN.

If you have a liking for bees, and are not afraid to handle them, we would advise you to keep some instead of buying honey.

Illinois. N. W. DADANT & SON.

If you will read and study the matter it will pay much better to keep the bees, especially if you like such work and study, or have children that do.

Michigan. C. A. J. COOK.

If you will buy what your family need, you'd better do so; but if your family like honey and you won't buy it, you'd better keep bees, that your family may be supplied.

Vermont. N. W. A. E. MANUM.

If your experience is like that of three-fourths of those who propose to keep only a few bees for their own use, undoubtedly you could buy honey cheaper than to raise it—if you would.

Illinois. N. C. J. A. GREEN.

Very much depends upon your location, your qualifications for farming and bee-keeping, how large your farm is, and other things. Usually you will make the most money by letting bees alone.

Michigan. S. W. JAMES HEDDON.

As honey is usually sold for less than it costs to produce it, it will be cheaper for you to buy it unless you make a better bee-keeper than a majority. You are probably pretty confident that you will be one of the successful ones.

New York. C. P. H. ELWOOD.

Keep bees to fertilize the fruit-bloom, and provide your family with the choicest sweet known. Many farmers go without what they do not produce. It is a hardship for a farmer to buy any thing to eat.

Illinois. N. W. C. MRS. L. HARRISON.

This will depend upon yourself. If you are willing to invest in a good book treating on the subject, and study the way of caring for bees, it will pay you to buy one or two colonies; but if you wish to buy them and let them care for themselves, then it is better to buy your honey.

Louisiana. E. C. P. L. VIALLON.

That depends. If you have a liking for bees, and the spare time to attend to them properly, get the bees, by all means. If, on the contrary, you have no special liking for them, and you are crowded for time during the summer months, you had better by far buy your honey.

New York. C. G. M. DOOLITTLE.

It is seldom that a farmer keeping one or two colonies just to get enough honey for his own use ever has any on his table. It is better for him to purchase a liberal supply for his family, of some good and worthy bee-keeper.

New York. E. RAMBLER.

Buy your honey. It won't pay to fuss with one or two colonies of bees. If you try to supply your family in that way you will likely go without the honey. The price of a few bushels of grain, or a small pig, will pay for your honey, and no bother on your part.

Wisconsin. S. W. E. FRANCE.

In most places it would pay you best to buy the honey. There are localities, however, where a few bees, half tended and half neglected, will hold their way from year to year, and frequently furnish a fine lot of honey. If other farmers like yourself do well with their bees you may safely follow suit.

Ohio. N. W. E. E. HASTY.

If your liver is all right, and you like honey, and kinder like the little critters, and are not afraid of their business end, why, get some bees and raise your honey; but if you don't care for much, and the stings poison you badly, and you are afraid that they will sting your blooded horses, you had best buy what little honey you want.

Wisconsin. S. W. S. I. FREEBORN.

If you are enough interested in bees to take fairly good care of them, it will be better to keep enough to furnish you honey. If you expect to have them "work for nothing and board themselves," you'd better buy your honey and save your time, money, and temper. But it might result, as it generally does with farmers who think it is cheaper to buy their strawberries, etc.—they usually go without.

Ohio. N. W. A. B. MASON.

Now look here. It's not much use to tell you, but I'll tell you, anyhow. You can buy a horse-shoe cheaper than you can make it, and the blacksmith can buy a bushel of oats from you cheaper than he can raise it. You see the point. But if you're such a stingy old hunkers that you won't buy any, it will be cheaper for you to raise it. Get your wife the honey, one way or the other.

Illinois. N. C. C. C. MILLER.

[The above covers the whole ground so well it hardly seems to me worth while to add any thing. Yet there is one thing I wish to emphasize. It depends almost altogether on the man and his surroundings. My attention was at first turned to bees by seeing just two hives in a pretty garden. The man was a physician, and his garden was his recreation and delight, and the bees were a part of it. The two colonies, although in old-fashioned patent hives with a glass door, were kept so neat and tidy that they were a thing of beauty, besides the goodly amount of honey that they gave him almost every year. Now, such a man will find both pleasure and profit in raising his own honey. As this was a country physician, he doubtless had quite a little time on his hands while waiting for calls. This time he wisely devoted to making his home pleasant, and caring for his nice garden. Now, I know of a great many other cases where somebody thinks he will make some money by keeping bees when he has already more unfinished work around his home than he can possibly look after. The pig and the chickens and the garden are not cared for. When he gets some bees it just aggravates the whole matter, and it all

ends in vexation and trouble. Such a man had better buy his honey. See what I have said about friend Terry's farming in the month of July, in another column.]

HEADS OF GRAIN FROM DIFFERENT FIELDS.

SHIPPING BEES IN LARGE CHAFF HIVES; HOW IT WAS DONE.

I shipped 24 colonies of bees by freight from Hardin, Colorado, April 25, arriving at Payson, Utah, late in the afternoon of the 28th. My hives are two-story chaff hives, holding 24 Simplicity frames. The hives were overflowing with bees. I left but very little honey in any one frame. Many of the hives had ten frames each of brood in all stages of growth. I did not lose a colony until after I arrived here. I lost three in hauling two miles from the depot, over the roughest road I ever attempted to haul bees on. The three colonies were not all killed; but the queen and so many of the workers were killed that I united them with other colonies. They have been building up so fast that I now have 42 colonies. I shall have to extract a few hundred pounds in a few days, as many of them have the twelve upper-story frames full and pretty nearly capped.

I prepared my bees for the trip as follows: I divided the brood and scattered it throughout both stories of the hive. I closed the entrance and left the cover off, covering the top with common wire screen. Of course, I fastened the frames in place. I loaded the hives on lumber, which was so arranged on slats, alternated, that it served as a very good spring. I put eighteen inches of straw in the end of the car, to break the force of the terrible knocking and bumping, and six inches at the sides. I had a deck temporarily built two feet above the top of the hives. When it was hot I kept the end door and one side door open sufficiently to furnish a good draft. During the first day and a half it was raining and cool; after that it was very hot. I had a horse and cow in the car next to the bees; and although the bees escaped some, they did not sting the stock. When a bee came out of the hive it struck straight out for a window, and was lost. A thermometer, which I placed just above the straw cushion at one side of the car, not directly over the bees, did not, at any time, show over 92 degrees.

I think this is a good honey country. There is a great deal of alfalfa (called "lucerne" here) and sweet clover, and fruit-bloom of all kinds. The country is full of bees.

Payson, Utah, June 23. JAMES A. TODD.

QUEENS IN THE SECTIONS, AND WHY: BRICK HIVES FOR THE PRODUCTION OF COMB HONEY.

On page 474, June 1, E. H. Schaeffle wants to know why his queens raised brood in his sections. I think it was on account of the cold weather, and lack of honey in the first part of the season, causing the bees to hang in the supers a long time, drawing the combs slowly, and no honey to store. The queens went up there to keep warm, and got into mischief. I do not use queen-excluders. I made 20,000 lbs. of comb honey last season, all in $4\frac{1}{4}$ by $1\frac{1}{2}$ sections, and had but four sections with brood in them. This season I have found about two dozen sections with drone brood in them, which I account for as above, and partly because I did not use full sheets of foundation in those sections. Those with full foundation did not have

brood. I nearly always use full sheets of foundation in sections.

I have 128 stands of bees this season. They are storing honey very fast now—the finest I ever saw. The weather is rather cool for this time of year. It may indicate a long honey harvest. I have built six brick bee-hives as an experiment, for comb honey. I think the bricks will warm through during the day, and give off heat all night, keeping the supers warm, so the bees can draw comb all night. Who has tried brick hives? My bees seem to like them first rate so far. Tell us all you can about Punic bees. The *American Bee Journal* gave them a big puff lately. If we had that kind of bees in California, half a dozen swarms would make a man rich.

A. B. MELLEN.

Acton, Cal., June 13.

[Mr. Schaeffle's experience was very unusual. Old bee-keepers like W. Z. Hutchinson and Dr. Miller have since said as much. No, I shall still advise comb-honey producers not to bother with queen-excluders, even if friend S. did think such advice pernicious. No one else has had such experience.—There may not be a bad idea in the brick hives for you: but in our climate, in the spring they would gather too much cold at night, and give it off even during the day, when the bees need the warmth.] E. R.

THOSE 5-BANDED BEES OF ELMER HUTCHINSON'S.

Friend Root:—All the bees from my breeding queen are five-banded, like the sample I sent you, and all are equally light-colored when young. When they become old, say six weeks to two months, they turn a little darker: but the five bands remain, and are all yellow, only a slightly darker color. The queen herself is very light-colored, with not even a tip of black on the tip of her abdomen.

The prospects for a good honey crop are better than they have been for the last five years. White clover is very abundant: basswood hangs full of buds, and the bees are very strong.

ELMER HUTCHINSON.

Rogersville, Mich., June 20.

FEEDING IN THE BROOD-NEST; DOVETAILED HIVE, VAN DEUSEN FRAMES, ETC.

In the March number, page 200, 1890, Mrs. Axtell speaks of feeding outdoors in troughs, preferring the plan to the use of saucers, pans, and inverted cans above the brood-chamber. I heartily coincide in her methods, but I use the trough inside the brood-chamber. A tin receptacle the full length of the inside of the hive, one inch wide—it may be made the width of two frames if desired, and three to six inches deep, with half-inch projections that it may hang suspended in the hive, taking the place of the one frame removed for its reception. A slat, fitting the trough loosely, and perforated with many small holes through which the bees feed, floats on the surface of the syrup. A trough of the above dimensions, six inches deep, will have a capacity of over half a gallon; one may be placed on each side of the brood-chamber, and feeding be done quickly, and without the melancholy drowning of our bees.

HOW TO REMOVE PROPOLIS.

I see many remedies recommended for the removal of propolis from the hands. Alcohol will be found to entirely answer the purpose. A small quantity poured upon the hands and rubbed vigorously, will convince any one.

INTRODUCING WITH PEPPERMINT.

There are numerous and diverse ways by which a queen may be successfully introduced

to a queenless colony; but all are accompanied by delays and sometimes exasperating failures. I have introduced queens at once by smoking the colony on the removal of the queen, sprinkling the usurping queen and colony with peppermint water, and at once releasing on top of frames. This plan has met with no failure at my hands, the queen beginning to lay, and the bees remaining quiet, apparently not noticing the change of queens.

My 18 colonies are now in winter quarters. All are in Dovetailed hives, with outside cases, and packed in mineral wool.

I am greatly pleased with the broad (one inch) and thick Van Deusen metal-cornered frames. I shall replace all frames with them in the spring.

J. B. ENOS.
Connellsville, Pa., Nov. 26, 1890.

[Your feeder, if made of wood, would be exactly what Doolittle uses. It is a very good feeder, by the way. Propolis may be removed with alcohol; but benzine or gasoline, now used in most homes, is cheaper, and about as good. A weak solution of lye is recommended by Dr. A. B. Mason for the same purpose. Queens can very often be introduced by giving them and the bees some strong scent; but, if I mistake not, there have been quite a number of repeated failures with the peppermint plan. It is a good deal safer to cage queens on the candy plan, and then you may scent them to advantage. See Our Own Apiary, last issue.] E. R.

A WET SEASON IN MISSOURI.

It is very discouraging here this spring for bee-keepers, farming, and, in fact, every thing else, as it has been so wet. To-day is June 20, and it has rained 17 days this month. White clover commenced to bloom May 20, but it has been too wet for it to do any good. It has nearly quit blooming. Bees are making only their living, and I judge a good share of that is bread by the amount they are carrying in. There is always plenty of pollen here. I have 57 colonies of bees, and I don't suppose they have 3 lbs. of honey apiece in their hives.

Raymore, Mo., June 20. WM. O. HEIVLY.

WILL IT PAY TO REQUEEN?

Will it pay me to requeen a small apiary in order to get a strain of bees that is more industrious? Do you think there is any difference in bees in regard to their working qualities?

Olivet, O., June 30. E. S. MEAD.

[It would not pay you unless you wish bees of a more gentle disposition. While Italians will gather more honey than blacks, they will not gather much more than hybrids.]

To date I have taken a little over 17 barrels (50 gallons each) of extracted honey from 116 colonies, and the honey is of fair quality.

Sterling, Ark., June 13. CHAS. H. KINCADe.

We now have frequent showers, and fine weather for bees to work. The fields are white with clover, but the bees will hardly notice it. I hope it will yet yield, for my bees were never in a better condition for a harvest.

Belle Vernon, Pa., June 17. A. B. BAIRD.

ALLEY'S AUTOMATIC SWARMER.

We must speak of the swarmer. All the reports that have come in are favorable. Not one unfavorable report has come to hand up to date. Our experience this season has been this: Occasionally a queen could not find her way through the tube. This was quickly remedied. A hole $1\frac{1}{2}$ inches in diameter was quickly made with a center-bit directly

over the tube in box B, and covered with wire cloth. This let the light in just where it was most needed. After that, about the first bee that entered box B was the queen, and there was no further trouble. Those who have received the swarmer and found this trouble will take the hint. It was found that, the nearer the hive or decoy-box for catching the swarm was placed to the entrance of the parent hive, the better the swarmer worked. Instead of using a hive for catching the swarm, a box made of any light material is better. We placed a comb in the decoy-box; and a day or so before the swarm issued, the bees would commence to work into the box; then when a swarm came off they quickly hived themselves. Now, in order to bring the boxes A and C nearer the parent hive, other holes were made in the center of the tops of them. No one is obliged to use the swarmer just as they are received from us. Make any change in them to fit your hives and situation. The idea should not be lost sight of that, the nearer the decoy-box can be placed to the parent colony, the better. The swarmer is an assured success. Of this there is not a particle of doubt.—*American Apiculturist, July 1.*

SPECIAL DEPARTMENT FOR A. I. ROOT, AND HIS FRIENDS WHO LOVE TO RAISE CROPS.

SPURIOUS TOMATO SEED.

With the large demand for the Ignotum, we sold out all the seed of our own raising, and were obliged to purchase seed; but it all came from our bee-friends, so far as we know, and from those whom we judge to be reliable. We found out, however, that some who sold the seed were very careless, if nothing worse; for some of our plants, when they began to show the second leaf, had foliage like the Mikado. These were pulled out and thrown away, of course. One of our patrons complained that he raised over 2000 plants, and they seemed to be from seed of every variety and description. I know it is a pretty hard matter to make amends for work like this; but we should prefer to do what is right and fair in the matter, and we are going to work right off now to try to save all our seeds from tomatoes of our growing, and these will all be from selected tomatoes. Surely there is no excellence without great labor.

ONION-SETS.

We have just received the following from Landreth:

Mr. Root:—Replying to yours of the 2d inst., we book your order for Pearl sets, subject to our ability to supply them after filling orders on file. The writer noticed an article in the journal relating to Pearl sets; and even in the face of it we do not recommend them for fall planting, except in the South, where the winters are open. They have even been frozen out and entirely killed as far south as Georgia. It is the most tender onion we know of; and were we to recommend them for fall planting in the North it would undoubtedly bring us a number of orders and a stream of complaints later on.

D. LANDRETH & SONS.

Philadelphia, Pa., July 3.

THE SOUTHERN PRIZE TURNIP.

Friend Root:—As you put my hobby before the readers of GLEANINGS before it had been properly groomed, I beg leave to state some of the reasons on which my conclusions are based. I have been raising turnips on a rather large scale for several years, feeding them to stock. I observed that oats fell down before maturing, and corn grew stronger on the turnip ground than on other parts of the field, when only the tops had been left to decay. Twenty-five tons can easily be grown to the acre, and I suppose

the tops add a fifth more. We have 30 tons of green matter, about 18 lbs. for each hill of corn. This estimate is on the Cowhorn variety.

The Southern Prize, I reason, will do nearly as well, besides being green and fresh; and the fall crop of tops having decayed, a new crop begins to grow as soon as the freeze is out of the ground; and when the time comes to plow for corn we have a mass of tops a foot high, our 18 lbs. of green manure in the best possible condition to mature the hill of corn, and this has all been done between the seasons of planting.

The nutritive properties of turnips, I am sure, are greatly underrated. The chemists say that turnips contain 90 per cent water. How is it that they are so highly esteemed for feeding sheep, when sheep require less water than any other class of stock? My experience is, in feeding to all kinds of stock (even to the chickens), that it is a kind of water that helps a little corn and fodder out mightily, and you save the pumping. I can get 100 bushels of turnips with as little labor as it takes to raise one bushel of potatoes; and, supposing the stock harvest both crops, the gain would be with the stock that gathered the turnips and the ground they grew on.

One of your correspondents, a year or so ago, said the way to insure a crop is to sow the seed two inches deep; and supposing you had proved the statement, as you are so well fixed for that kind of business, was why I wrote you.

Avon, Ind., July 7. A. A. PARSONS.

To-day finishes the strawberries with me. I marketed 46 bushels. How do you like the Enhance? Mr. Young, the originator, has another wonderful crop of it. He told me the other day that his advertisement in GLEANINGS brought him more orders for plants than any other paper he used. J. GUISINGER.

Ada, Ohio, June 5.

THE NEW STRAWBERRIES, ONIONS, ETC.

Your last GLEANINGS is a very valuable and interesting number. I have read your reports on the Haverland strawberry, with much interest. It is a very fine berry indeed. I see you have added the Parker Earle to your list. I don't want so say too much of this variety at present, for I have seen it in fruit here only this season; but it was a sight long to be remembered. It was the most productive strawberry I ever saw, I think. That and Bubach No. 5 will make a fine team. I would advise you, from what I have seen of this berry, to take care of every plant you have, for I think they will please you; but, of course, I may be mistaken; but from the reports we are getting for our July number, Parker Earle is doing most excellently outside of what I have myself seen. Michel's Early is doing very well in most places. Our July report will be rather late—15th to 20th; but you will find it very interesting on the strawberry. We would only suggest that you also try a few of the Princess, pistillate.

I notice the tobacco dust with you was not a success for the cucumber beetle this year. I would say, for the first time I had a hard matter to save our "cukes" and melons this year, but we did with the tobacco dust and air-slacked lime, mixed. This I have always used, but had to use it more freely this year than ever before.

I have a white Silver Skin growing, in every way similar to the Egyptian, except that the tops make a nice-sized bottom, and very few go to seed except the largest. The sets are the best-keeping onion I ever saw. We kept them last year in our small berry-crates, and did not

notice one sprouted at the time of planting. We have found a good market here for these bunched, selling for 25 to 35 cents per dozen bunches; on an average, 30 cents or more. Last Saturday we took in 96 dozen. They brought \$30, costing 3 cents per dozen for peeling. But I don't think they run as large as the onion you speak of; or, at least, mine did not this year. But I know my land is not as good as yours; but I am wonderfully well pleased with it.

Rio Vista, Va., July 7. M. T. THOMPSON.

THE KEEPING QUALITIES OF THE BLOOMSDALE PEARL ONION.

Friend Root:—In reply to your inquiry about the keeping qualities of the Bloomsdale Pearl onion, I can only say that I do not know. So far I have not been able to keep them long enough to find out. I pulled some this year with the intention of keeping them, but sold them last week, after they had been on the ground exposed to the hot sun for about four weeks. They were then sound and sweet. I have no more, and so can not make a trial this year. The onion is so sound and firm that I believe it will prove a good keeper. A. SION.

Kyle, Tex., July 8.

STRAWBERRIES IN WISCONSIN, ETC.

My strawberry crop this year was a failure on account of the hard frost in May. There was one man here who got up in the night two or three times, and covered his up; and as the result of a few hours' work, from half an acre he picked 60 bushels of berries. Another year I shall cover mine.

THE LANG WEEDER.

Did you ever use a Lang weeder for putting in strawberry-runners? If you have not, try it and you will not want to use any more stones and sods to hold them down. Take the weeder in the right hand and the runner in the left; make a slit in the ground, and then shove the runner in, being careful not to cover the end. A smart boy, when he gets used to it, can put in 1000 an hour, and then they root about three times as quick. By this method I can get a stand of plants, even if it is dry for six weeks. I should as soon think of being without a hoe as a Lang weeder. I save the price of half a dozen every day I use one.

P. H. FELLOWS.

Brodhead, Wis.

[We have used the Lang weeder, but find a garden trowel about as handy.]

OUR HOMES.

A righteous man regardeth the life of his beast.—PR. 12: 10.
Charity suffereth long, and is kind.—II. COR. 13: 4.

Our business usually begins to slack up toward the Fourth of July, so that we can breathe a little easier, and think about visiting "our neighbors" and taking a holiday, especially when the Fourth of July comes. Just after dinner on the 3d of July I obtained a "leave of absence" until the Fourth of July was over. As horses are, as a rule, mostly pressed into service during the Fourth of July, I found myself obliged to take one of the horses from our big team for my buggy-ride of 60 or 75 miles. They decided to let me have old Jack. Jack would be worth, perhaps, \$200, or even more, if it were not for an infirmity. When he is taxed toward the limit of his strength he is troubled with the heaves, and begins to cough. He is a large, powerful horse; and although he is not

used to being driven in a buggy, just as soon as I gave him the word he started off on a long steady lop that takes one forward at a pretty good pace, although the horse does not seem to be making much exertion. He kept this lop up, without any urging, for seven or eight miles. Then he began to lag a little. A little chirrup, however, would start him up, and he would go again almost as well as when he started. On account of his infirmity it is not well to have him get wet. But a cold thunderstorm was approaching from the north. In order to reach shelter during the storm I hurried him, even when he was pretty tired already. Then I noticed that he began to show the sweat just a little; and to get him in out of the storm I used the whip a little—just touching him with the end of the lash. He is so unsoused to the whip that this startled him, and he pushed on until he began to cough. Just as the big drops began to fall we reached the shed we were making for. Then I got out and patted my horse, and began to get acquainted with him.

"Good old fellow Jack, I really beg your pardon for having used the whip a little on a horse that never needs whipping. But I hope you will recognize, as you hear the storm outside, that I did it for your own good."

He was panting, however, and coughing, and it took him ten or fifteen minutes to fully recover his breath, and to get entirely over being urged beyond his strength. Then the cough gradually abated; and when the rain had ceased he started off with the same strength and ambition that he showed when he first came from the stable. As I drove out of the shed I was planning to myself that I should boast to Mrs. Root that I did not get even a spatter of mud on the cleanly washed buggy. Before many miles, however, we had a repetition of the thunderstorm; and this time our refuge was a covered bridge. We did not reach it until the horse got pretty wet; and the north wind blew through the bridge so as to make a draft that I knew must be bad for the horse. His coughing increased, and I finally decided that we *must* push ahead, regardless of the rain, to a better shelter. Now, the point of this little sketch is this: What a wicked and brutal thing it would have been to whip this horse to make him go ahead when his strength was exhausted, and while he was doing the very best the poor fellow could do! When urged the second time, his infirmity showed worse than the first, and I resolved to get a warm stable for him, no matter what it might cost, and have him well cared for and fed before he did any more service. I said to him, as I got him out of the rain, "Look here, old fellow: you are one of the best horses I ever got acquainted with; and you and I are going to be friends as long as we live. If anybody ever overtasks your strength needlessly, or scolds you, or abuses you, when I am around, if I can not stop it otherwise I am ready to fight for you."

And now I want to tell you that we often find among horses, as well as among human beings, a sort of nobility. As it was time for firecrackers, Jack started a little several times, and looked somewhat troubled when they came around him pretty thickly. But when I assured him it was all right, and that they would not do him any harm, he gave me a look as if he were mentally wondering whether his new driver was thoroughly posted in all these matters, and knew what he was saying. But when I told him I *knew* all about firecrackers—that they were all right—he seemed to take my word for it, and we had no further trouble.

During the Fourth (the next day) Jack and I had a chance to get pretty well acquainted with firecrackers and fireworks. In fact, I

drove him about twenty miles after sundown, and before eleven o'clock; so we were passing many "homes" during almost all that ride. Around the doorway at every home were more or less juveniles celebrating the Fourth of July. Their kind mammas had permitted them to have a little fire out in the yard: and even the little tots, not more than two years old, were "celebrating." The grown-up boys—yes, some that were of age or more—generally helped—that is, where they were not off with their girls. The Fourth of July is a grand time to go riding with your "best girl," you know. If you don't know—why, you ought to (at least, in my opinion), providing you do not overdrive your horse, or forget him, in your devotion to your companion. I do not think I saw very many horses overdriven, unless in one or two instances, where the occupants were intoxicated. There was not any girl in the crowd in these cases. Come to think of it, the young men with their girls generally drove very slowly—so much so that Jack and I had to go past them, and they were too busy to even think of turning out of the road. Sometimes the girl was driving, and sometimes *nobody* seemed to be driving very much. Never mind. It is all right, providing they get home in good season, and remember that a solemn and sacred responsibility rests upon the boys and girls of our land, even on the Fourth of July. Well, faithful Jack, during those two days, won such a place in my affections that I mentally resolved to tell Mrs. Root, when I got home, something like this:

"Look here, Sue. I have made a resolution that, whenever Jack misbehaves in any way, I will remember that he has a great big balance to his credit, made up during this trip: therefore he must not be scolded, nor, under any circumstances, whipped. You are to remind me of this agreement, or *covenant*, if that is the right word to use, between myself and this horse."

By the way, friends, wouldn't it be an excellent idea to *look* for opportunities of laying up a balance of credit on the good side of *everybody*, to be brought out and held up to overbalance the time when they are bad? My dear friend, have you not yet discovered that every human being on the face of the earth will, sooner or later, act bad in some way? and if horses should do as badly as we "humans" do, would it be any thing to be wondered at? Sure enough, my good friend Jack acted badly before we got home—at least, it seemed to me that he did at the time, and I came pretty near forgetting my good resolution. Long before we reached Medina, away off over the hills I saw the fireworks—rockets innumerable, and occasionally a balloon. When we were within perhaps a quarter of a mile of the town, Jack, too, began to notice, with his horse sense, that there was some unusual display in the heavens. He had seen stars, of course, time and time again, ever since he was a colt; but who ever saw stars shoot up in that way, and then pop to pieces with a boom, spreading sparks and fireballs everywhere? He pricked up his ears, and followed the rockets with his eyes, even looking almost straight over his head. My path led directly by the square where the fireworks were being sent up. At first I thought Jack was steady enough to go right through them all. As I urged him forward he began to tremble, especially when a rocket fell pretty near to him. Then he would turn his head around and look at me inquiringly, evidently anxious to know just what I proposed to do, and perhaps feeling a little bit doubtful about my own good sense and judgment. So I decided to turn off one block before we reached the

scene, and go around; but of course I could not tell him this. So much had been going on during the day that I had not had my usual afternoon nap; and the Fourth of July dinner was late, so I began to feel a very great hankering for the privilege of laying my head on its accustomed pillow. This made me somewhat impatient; and when Jack said to me, as plainly as actions could say, that he was really afraid to go further on that street, I grabbed the whip and was going to give him to understand that, when I said go ahead, I meant just exactly *go ahead* and nothing else. Then I remembered my resolution. We were pretty near the corner; but Jack could not understand, of course, that I proposed turning off at the corner. He thought he had got to go past that volcano of pyrotechnics. To make him go on to a point that would lead us out of danger, I did use the whip; but I am glad to tell you that I used it *lovingly*. I did not give him a *stroke* more than was necessary, nor did I strike even a fraction *harder* than was really needed to get him up to the point where he could see the turn. Then it was worth something to see how he pricked up his ears and started off, tired as he was, on a brisk trot. He seemed to "catch on" all at once, just how we were going to get home; and, tired and weary as we *both* were, he fetched around to his stable in fine style. Huber, Cadie, Constance, and mamma were wide awake and full of the Fourth of July, but, like myself, pretty tired. Something new in the way of balloons attracted my attention until my wife told me I had better take care of my horse and go to bed. But when I went to lead him into his stable, old Charlie, who has a fashion of getting "cast" once in a while, was found to be down and could not get up. At first Mrs. Root thought he did not breathe, and this got me a little excited. As soon as I loosened his halter-strap, however, and gave him a pull, up he came on his feet, as sound as ever. Then tired old Jack was unharnessed, and by that time I began to discover that I was about on the last point of nervous exhaustion. Oh how I *did* long to lay my head on my pillow, and not stir, nor hear a sound nor a word from anybody! Why, my friend, if sleep should fail me I should be—what? Well, I felt that night like—something about half way between a walking skeleton and a maniac. Do horses ever feel that way? Yes, I am sure they do. I have seen them sway about through overwork until they looked and acted just as I *felt*. Suppose somebody had whipped me at just that point, and tried to make me go ahead and do more work. Well, people do whip horses under just such circumstances. They whip them when they are suffering for food and perhaps for drink, when they are exhausted to the last point of endurance by long hours without rest. They whip them until they *do fall down and die*. Now, if you can realize and understand what it would be to be whipped and pushed ahead under circumstances like these, I shall have accomplished the purpose of my little story to-day. "A merciful man regardeth the life of his beast." My friend, if you are a Christian, and I hope you are, you profess to be a merciful man; and are you merciful to your beast?

Before I close, I wish to tell you something more about horses that I got from friend Terry. I went all over the farm, and looked at every thing—dug into the ground, climbed up on the fences, looked over into the fields, etc. I looked for thistles, docks, and other weeds along the roadsides. I watched to see whether the horses had stepped on his hills in turning around, especially as I saw the potatoes come up pretty near the fences. To my surprise, the potatoes were just as good, or even better, where the

end of the row comes, as anywhere. Said I, "Why, friend T., surely your planter does not plant the potatoes clear up square and true to the fence like this?"

"Oh, no! We plant two or three hills by hand."

"Oh, yes! I see. But how does it come that none of these hills at the ends of the rows have been stepped on by turning the horse around?"

"Well, Mr. Root, it comes by having a horse that *knows* better than to step on hills. He is, perhaps, 18 years old, and has been at that work all his life."

"There, friend Terry, that is just such a horse as I want. I would give almost anything for one."

"Why, friend Root, you have one already. Almost any horse can be taught to do it. The point is, with the driver. More hills are stepped on by the driver yanking or scolding the horse until he is so worried he *can not* attend to his work, than any horse steps on of himself. Teach the horse kindly what is wanted, then let him manage it alone by himself, and he will keep off the potatoes."

"Now, look here, friend Terry; I have often suggested that an old gentle horse should be driven without lines entirely. Why not omit the lines, and then the driver could not yank him, even if he would?"

"Well, you can omit the lines if you choose. In fact, I have seen it done a good many times. But a line properly used is a help, both to the horse and to the driver. You see, a horse gets so used to the regular routine that he will turn around of himself, and go back on the next row without a word; and when, for some reason or other, we wish to stop work, or to work in a different way, a line helps to indicate what you want him to do. I should prefer to have the lines, but use them only to direct the horse and in a very gentle manner."

After this talk I began thinking of how many times I had been pained by seeing a good horse worried, and made inefficient, by yanking and scolding. Let me tell you what I have seen—not, perhaps, at one time, but at different times. Suppose it is Hubbard squashes we are cultivating. Strong thrifty plants are valuable, and they are planted so far apart there is no difficulty at all in turning so as to avoid injuring them. At the end of the row the horse would have turned around all right without hitting a plant, especially as its leaves are, say, a foot high. The driver, however, has his mind on something else, until he thinks the horse is going to step on a plant. He yells at him, and gives him a yank. The horse looks pained, forgets to notice his feet, and steps on the best plant in the hill at the end of the row. Then the driver yells, and calls him a fool, and yanks him harder. He backs up and tramps on the hill behind him, forgets all about the plants and every thing else, and possibly thinks there is no use trying to please, and so he finally steps on *another* hill. After a while they get started again. The driver has been desired to swing the cultivator up between the hills as much as possible, as they are a good way apart, and pull it out again before reaching the next hill. While doing this he forgets all about the horse, and the horse steps on the leaves of another plant. The driver calls him an idiot, and gives him another yank with the lines, and the poor horse crosses clear over until he steps on a hill on the other side. Now, I have seen nearly as bad work as this in one afternoon; and I have seen at least four or five different drivers do *some* of that kind of work. The horse gets too near the row. The driver then loses his temper a little, gives the horse a tremendous yank on the other side, and pretty soon the

horse gets so he does not pay any attention whatever to rows or plants. What a sad, sad state of affairs this is, both for horse and driver! It is the old trouble I spoke of in my last paper—sin and Satan. Perhaps somebody may say, "Well, Mr. Root, when you cultivate I suppose we have perfect work, and an exhibition of perfect, even temper."

My good friend, I do not often cultivate more than one or two rows at a time—that is, I do not cultivate potatoes and squashes much more than that. But, oh dear me! there is a kind of "cultivating" that I do every day of my life. I am afraid—yes, I am *sorely* afraid—that, if those around me were to tell the full truth, they would be obliged to admit that I do *sometimes* "yank on the lines." While it is bad to spoil the disposition of a horse by giving way to ill temper, it is a thousand times worse to spoil the temper and disposition of human beings by giving way in this manner to sin and Satan. I suppose the good friends about me would be very loth to tell right out what they sometimes think. Perhaps they would excuse me by saying that I am overburdened with cares, or suffering from nervous prostration, etc. The best remedy for nervous prostration, or, in fact, for any infirmity of the nerves, is to practice the latter of our two texts—"Suffereth long and is kind." This little text is not only conducive to the health, but it is a *money-making* investment. A man who is cultivating corn, and who has a disposition all day long to "suffer long and be kind," accomplishes a great deal more. He makes *more money* in every way. If we look about us we shall find sin and Satan along in this line almost *everywhere*. It is not only out in the fields with the horses, and among the farm help, but even in our homes; and while I write, there comes to me a plaintive letter from a child. When I first thought of putting it into print it occurred to me that there might be many, many homes, and many fathers and mothers, who might feel startled, thinking perhaps it was a child of *their own*—an inmate of *their* home who had seen fit to write Uncle Amos that letter. As you read it, dear friend, may God give you grace to own up and set up a thorough reform, if it is needed, in your family. May God give you grace to say, "Get thee behind me, Satan," with such energy and determination that a change *shall* be brought about. Here is the letter:

Dear Mr. Root:—I am so glad you wrote about the trouble in your German family. Won't you be kind enough to pray for my papa and mamma just as you did for them? They are living the same way—never see any thing good in each other, though they are both good to other people. I have been an invalid for a long time. I suffered horrors; but I don't mind that half as much as I do their ill treatment of each other. There is little or no enjoyment in life for us on account of it. They will both read your Home talk in the last GLEANINGS, but I am afraid they won't profit by it. Do help us to pray for them.

To be sure, I will pray for you, my dear young friend; and I wish to ask the readers of GLEANINGS to unite with me in that prayer; and won't this wonderful Endeavor society, that is doing so much, not only pray with us but try to help us? Let me beg of you, dear father and mother, whose eyes meet these pages, for Jesus' sake do not "yank on the lines" when things go wrong. Don't "yank" at each other, no matter how strongly *Satan* urges. When temptation comes, take my little prayer into your hearts, and breathe a fervent "Lord, help," and I assure you it will bring peace and joy to take the place of rankling and bitterness. Henry Drummond, in that wonderful little book entitled "The Greatest Thing in

the World," has the following in regard to this vice of which I have been speaking:

"No form of vice, not worldliness, not greed of gold, not drunkenness itself, does more to unchristianize society than evil temper. For embittering life, for breaking up communities, for destroying the most sacred relationships, for devastating homes, for withering up men and women, for taking the bloom off childhood, in short, for sheer gratuitous misery-producing power, this influence stands alone."

A VISIT TO T. B. TERRY.

HOW HIS FARM LOOKS DURING THE FORE PART OF JULY.

It was just after the thunder-shower, as you may remember, when I came in sight of his beautiful place. His premises were not only plainly manifest by looking over into the fields, but the sides of the roads indicated it at once. His place is on a road rather unfrequented, and therefore the grass comes up pretty well to the wagon-tracks. But it is clean grass, and nothing else. No weeds are allowed to go to seed on any ground that he has any sort of control over. I talked with him about abandoning fences at the roadside; but he says his neighbors are largely engaged in dairying and stock-raising, so it would inconvenience them so much that he must, at least for the present, keep his farm fenced in. Well, when we approached the barn and dwelling-house, on opposite sides of the street, I came very near uttering exclamations of surprise. The lawn inside of the dooryard fence is not a bit handsomer than that outside. Yes, the grass was so beautifully trimmed with the lawn-mower, clear up to the barnyard and stable-doors, that I almost hesitated to cross it with my buggy. I said "stable-doors," but there are not any stable-doors until you get inside of the covered barnyard. I began wondering how it was possible to keep the premises around the barn in such "cified" style, if I may use the expression. Then I remembered that friend Terry has not a chicken, cow, nor pig, on his whole farm. Oh, yes! they do have one cow to furnish milk and cream to go with the strawberries. I did not ask what became of the refuse from the kitchen, that is ordinarily given to pigs and chickens, but I presume it goes into the slop-barrel on wheels, and is then wheeled out on to the ground, where it is soon worked under. In banishing poultry he certainly gets rid of a great deal of bother and a lot of unsightliness. In fact, I do not know of any animal that can make more disorder and confusion than an enterprising, go-ahead hen. Give her a lot of half-grown chickens to help, and they are certainly a terror to neatness. On the other hand, there is a great deal wasted on the average farm and around the average farmhouse, if there are no chickens around to pick it up. I do not like poultry around the house any better than Mr. Terry does; but I am not yet quite ready to lose the daily supply of eggs that I get, costing a great part of the year, almost nothing. Another thing, I do like to see a troupe of nice poultry start out to follow the plow or cultivator. Where we manure ground up to the highest standard of fertility, great quantities of angleworms seem to be a natural product, and I believe they would eat up and destroy a great part of this rich manure if we did not have poultry on our grounds to follow after the tools whenever the ground is stirred and turned over. It is true, the chickens get into the tool-house to some extent (but we have almost got them broken of the habit, however), and I feel

as much disgust at their droppings as almost anybody. One of the first lessons my father taught me was to save *every* thing; and the poultry are adepts in economizing and saving every little odds and ends eatable. Within the past few days they have been making sad havoc by eating off the foliage of our late cabbages where they were planted near the barn. Of course, it was the Brahmans that did this. We stopped it, however, by giving them all the shelled corn they could eat, and planting some early cabbages very close together right around the poultry-house.

It was a great treat to me to be permitted to run over Mr. Terry's farm and ask all the questions I chose. I had been carefully scanning the crops through Medina and Summit Counties, and therefore I was better prepared to notice the marked difference through all of Terry's fields. First, the crops were all even. How I do like to see a crop all alike over a large field! The rule is, you know, spots of fine growth, and then larger spots of poor miserable growth; and on many of the farms we see places where they do not even get back their seed. How can there be any good average, so long as such things exist? Well, Mr. Terry has been hard at work for years in fetching up the poor spots. Where it is wet, careful, thorough underdraining has fixed that part of it. Where it lacks in fertility, a little manure, or mulching with straw at just the right time, and encouraging a growth of *clover* first, last, and always, has brought those poor places up to the general average. Now, I wish to emphasize one point right here. Everybody seems to be trying to find out some excuse for Terry's great crops, rather than to admit that the credit belongs to Terry himself. One friend of mine said, a few days ago, something like this:

"Oh, yes! you talk Terry. Terry has a great army of men to help him, and plenty of money, and it is no wonder that he can raise big crops."

I stared at the man in surprise, and he stared at me in surprise a little when I quietly remarked, "Why, my good friend, you are making a tremendous mistake. Terry's great hobby (next to clover) is in managing so as to avoid employing high-priced help. He and his boy and one hired man do all the farming; and a great part of the year they do not have even the one hired man."

Well, a good many have said, "Oh, yes! Mr. Terry has got a piece of the richest land in the State of Ohio; and anybody can make a living on such soil as he has."

That, too, is a big blunder. We got a bright clean spade out of the tool-house, and I made it my special business to dig down as I passed through the fields. In one place where the clover was particularly rank and strong I uttered an exclamation of surprise when the spade showed poor yellow-looking dirt almost exactly like the poorest ground on my own place at home. Yes, we have some ground that is so poor that I have just thrown away manure in trying to make it raise something. It is doing better, but it takes time. Well, friend Terry has several acres yet that has never been reclaimed. As we looked it over he said it would probably not bring over \$15.00 per acre. The original soil had been washed off, and it was hard, stony, gravelly, yellow clay. A part, however, of this same kind of land has been redeemed. Just over the fence there was a beautiful stand of wheat, all even, with great long heads just bending under their loads of plump grain. Clover and underdraining did the business. From what experience I have had, I should say that his tiles were too small; but he said they were all he could afford when he did the work. Another thing, many of them have

no outlet, except being stopped right in this hard gravel; but they are doing very satisfactory work. Mulching the poor portions with straw has also been a wonderful help in getting a stand of clover. It is the result of enthusiasm and steady work year after year, together with careful planning and experimenting, to make the most of some of the poorest ground to be found in the State of Ohio. There is, however, some very good ground on the place. This will produce excellent crops without very much care or attention since it is thoroughly underdrained.

While at Everett, on the river, we talked Terry, of course; and a store-keeper there told me he would like to see Terry manage with as little help as he used, on their rich river-bottom land. I asked him where the trouble lay, and he replied: "Why, Mr. Root, the *weeds* grow so enormously. It beats any thing you ever heard of. You can scarcely raise a crop of any kind, for the weeds shoot up, and get away above it, and you can see them all around you here, higher than your head."

Yes, I did see them "higher than my head;" and I saw rank luxuriant corn and potatoes struggling with the weeds. Oh, dear! what an excuse to bring forward—that the ground was unfortunate because the *weeds* grew so fast! Why, I just delight in seeing weeds grow on our place—that is, I delight in seeing them *undertake* to grow. Now, I, too, should like to see Mr. Terry take hold of some of that rich river-bottom ground, and I should like to see him manage the weeds. There may be a providence, however, in the fact that God has seen fit to plant him where he is—on a farm that averages about as poor naturally as almost any farmer in the State of Ohio has to contend with. If you think I am deceived, just visit friend Terry, as I did, and take the spade and go over his farm.

I was a little surprised to see their strawberry-patch struggling with wheat so that it might almost be called a wheat-field. But the reply was, that, after the frost killed the berries, it was not worth while to go to the expense of pulling out the wheat.

"But, my good friends, why didn't the wheat come up in the same way last year? When I was here a year ago there was not a spear of wheat on the whole half-acre."

"Oh! we pulled it out last year."

"Oh! you did, did you? Well, now, when I wrote about it in the strawberry-book I was under the impression that you shook the straw so thoroughly that no grain was left to germinate."

Now, friends, look here. Right here is a significant fact. Even our best thrashing-machines (for I suppose friend Terry employs a good thrasher) leave enough grain in the straw to make a thin seeding where the straw is put on the ground for a mulch as thoroughly as Terry does it among his strawberries. It is true, his strawberries were almost a failure, with the exception of the Sterling. I thought I had seen and tasted handsome berries; but I certainly never enjoyed any berries before as I did those during my last visit. I took supper while my horse was eating at Everett; but when I told them the fact, Mrs. Terry said I must have some strawberries anyhow. You know I not only eat a quart at a meal, as friend Terry does, but I eat a great many between meals. In the first place, the Sterling, besides being hardy, is about the most handsomely colored berry I ever saw. I do not believe the colored plates of strawberries have ever overdone the matter, so far as the Sterling is concerned. The berries are not extra large, but they are of good shape and even size; and then the strong tart taste

that I liken to lemons, with large berries fully ripe, is not an objection, with plenty of sugar and cream. I ate so many that I was ashamed to eat any more. One thing more: The heavy manuring we have been in the habit of giving our strawberries for some years past tends to make them awkward in shape, and, especially where there is abundance of rain, watery in flavor. Preparing the ground with clover, without using manure, gives us berries of better shape, and, I am pretty sure, berries of better flavor. By the way, I examined the soil critically around the shrubs in the dooryard. Mr. Terry got it out of his old clover-fields. Perhaps where the ground is good already, and where clover has been turned under for a good many years, such ground as that is certainly a splendid soil for any plant or fruit. I am planning now to grow some clover just on purpose to fit the ground for some crops that I do not succeed with to my satisfaction. I asked friend Terry how to manage, and he suggested cutting off the top of the clover often enough to keep it down where it would plow under nicely. A neighbor of mine wanted our big team a few days ago to turn a piece of clover under. The clover was so rank and long, that, after they tried it half a day, they had to give it up. So you see if we wish to turn under all the clover the land will produce, you have got to work and watch carefully.

In my next I want to tell you of another visit made to one of the most progressive and prominent farmers in the State of Ohio. It will be interesting, because this latter friend arrives at much the same conclusions that friend Terry does, but by quite a different method of working.

TOBACCO COLUMN.

CONDITIONS UNDER WHICH WE GIVE SMOKERS TO PERSONS WHO STOP USING TOBACCO.

First, the candidate must be one of those who have given up tobacco in consequence of what he has seen and read in this department. Second, he promises to pay for the smoker should he ever resume the use of tobacco in any form, after receiving the smoker. Third, he must be a subscriber to GLEANINGS. Any subscriber may, however, have smokers sent to neighbors or personal acquaintances whom he has labored with on the matter of tobacco-using, providing he give us his pledge that, if the one receiving the smoker ever uses tobacco again, he the subscriber will pay for the smoker. The one who receives the smoker in this case need not be a subscriber to GLEANINGS, though we greatly prefer that he be one, because we think he would be strengthened by reading the testimonies from time to time in regard to this matter. The full name and address of every one who makes the promise must be furnished for publication.

I have persuaded Mr. Jonas Yutzy, of this place, to quit using tobacco, and you will please send me a smoker for him; and if he ever uses it again he says he will pay you for the smoker.

Sunny Side, Md., May 16. M. H. DEWITT.

You may send a smoker to F. B. Fulkereth, as he has been induced through GLEANINGS to give up the use of tobacco. I have had him on probation for a year, and think he is worthy of the gift. I am his security in case the pledge is broken.

J. Q. MULFORD.
Lebanon, O., May 18.

Through the Tobacco Column in GLEANINGS I have quit the use of tobacco. I have used it for ten years. I never tried to quit before. If you will send a smoker I will never use the weed again. If I fail to keep my promise I will pay you for the smoker.

L. W. FRANKS.
Betzer, Mich., May 11.

THE FUND FOR HELEN KELLER.

SOME GOOD NEWS FOR TOMMY STRINGER.

W. S. Hart, Hawk's Park, Fla.	.....	\$1 00
W. F. Nehring, Strasburg, Ills.	.....	1 00
Mollie O. Large, Millersville, Ills.	.....	1 00
Kittie Bickford, Ellenton, Fla.	.....	25
A. A. Duncanson, Superior, Neb.	.....	1 00
T. H. Strickler, Solomon City, Kan.	.....	25
Stebbins' children, Churchland, Va.	.....	20
C. C. Phelps, E. Windsor Hill, Conn.	.....	25
"For Tommy," from Hanover, N. H.	.....	1 25
Sunday-s'-chool, Harmon, Ill.	.....	4 50
H. L. Wells, Rockville, Md.	.....	25
Mrs. Jackson, Sigourney, Iowa	.....	1 00
Lewis' children, Peru, Ind.	.....	10
W. W. Case, Baptists, N. J.	.....	1 00
J. N. Carroll, Jr., Owings Mills, Md.	.....	1 00
John Short, Moline, Mich.	.....	1 00
W. W. Kulp, Pottstown, Pa.	.....	40
Mr. and Mrs. Root, Assumption, Ill.	.....	1 00
E. Lee, Flintstone, Md.	.....	1 00
E. J. Hulse, Washington, D. C.	.....	1 00
George, Jessie, and Clara Easterday, Dexter, O.	.....	1 00
A Reader, Washington, Kan.	.....	2 00
E. C. Babcock, Elroy, Wis.	.....	1 00
Sallie Kulp and friends, Danboro, Pa.	.....	5 25
B. D. Sidwell and children, Flushing, O.	.....	2 00
W. E. Cunningham and friends, Kent's Store, Va.	.....	1 00
A subscriber, Crescent Hill, Ky.	.....	1 00
Mrs. Mary Hunter, Vicksburg, Mich.	.....	1 00
Cash, New Hampton, N. Y.	.....	1 00

Total, \$33 70

Mr. Charles J. Quinby, of White Plains, N. Y., sends us \$14, subscribed by the following persons:

Robert Sherwood.	.....	\$5 00
Robert Sherwood, Jr.	.....	1 00
Mrs. B. M. Gary.	.....	1 00
Miss M. E. Gary.	.....	1 00
Miss Bessie Gary.	.....	1 00
Mrs. W. H. Bowers.	.....	1 00
Mrs. A. E. Stewart.	.....	1 00
Miss Jennie Horton.	.....	1 00
Mrs. I. A. Soroby.	.....	1 00
Miss M. J. Hammond.	.....	1 00

Total, \$14 00

KIND WORDS FROM OUR CUSTOMERS.

THE WAY WE FILL ORDERS FOR BEES.

Your bees came to hand, and I must say in very good order, last Friday. I don't believe they were in their hive over an hour before they were at work as though they had always been there. I thank you very much for being so prompt, and sending me such a good lot; and though I did not see the queen, still the bees are looking all right.

Monticello, Ill., June 10. WILLIAM WORSLEY.

I do not know how any one interested in bee culture can get along without GLEANINGS. It is a very welcome journal, as it contains so many good things. The prospects for a good honey crop this season are assured. All kinds of flowers appear to contain a secretion of honey. White and red clover are better and more plentiful than for many years.

Muncy Station, Pa., June 22. R. J. CROMLEY.

OUR METHOD OF PUTTING UP BEES.

I received the bees from you a few days ago, and I would say that I think it is the very best way they could be sent. J. Rouse and S. Vanalstine, two bee-keepers, looked into the frames, and are very certain that there were not one dozen dead bees in all three boxes. We saw two of the queens. They were very nice ones. One had her wing clipped. What do you think caused that? Did you do it? If so, why?

Lynd, Minn., June 15. Z. O. TITUS.

"IS NOT EASILY PROVOKED, THINKETH NO EVIL."

On page 483 you will find these passages applied to my case, because in an article in the *Bee-keepers'*

Guide, page 131, I gave my opinion of the way Mr. Root answered an article concerning rich men and lawyers being Christians from a Bible standpoint, and told, also, how I had always regarded Mr. Root as a Christian, and why. The reason I wrote in that paper was because I thought Mr. Root shut off the liberty, in his paper, of speaking further on the subject, which I considered wrong; and as I saw that, in the *Bee-keepers' Guide*, there seemed to be fault found with Mr. Root for selling poor articles; and as my article was strictly religious, and I knew not for certain whether the editor of the *Guide* was a Christian; and if he were, perhaps he might be like Mr. Root—would favor the rich. I thought to tell of the articles I had bought of Mr. Root that I thought were not worth the money I had paid; also telling the facts concerning the smoker. If his clerks sent me a bill before I wrote, I never received it or I should not have written as I did; and when they wrote, asking me if I had received it, I thought they questioned my honesty, and I did not answer them, but believed their word, and waited, thinking that the letter or card might have been lost through the mails, and would yet come. But it never came, or, of course, I should not have been such a thief as to have put in the word "hope" instead of "trust," as this was the word I ought to have put in; and after the article was gone I saw it would look doubtful, and realized they could do no such business and prosper, and had no idea they did. I hoped the editor of the *Guide* would notice it, and not print the article. I meant to write and tell him, but prayed that God would lead him right, as I had taken pains to send my article away to have it copied, so as to have it plain, and I trust yet that it will all work for the glory of God.

My son, whom I had wished to print a bee-paper, and let me write my religious experience as Mr. Root did, had left me with the bees. I think the main reason was because his mother had no faith in his success in the business unless he took God at the helm, as I contended that Mr. Root did. The unjustice and unfairness of professed Christians had made him a skeptic in regard to the whole business of Christianity. He had the best of reasons for his doubts, and was much more honest than a hypocrite; and he has always contended that millionaires do not get their property by means of their honesty, and was not sure that Mr. Root was entirely unselfish. I wrote that article for his encouragement and benefit as well as Mr. Root's. But we, read, that "open rebuke is better than secret love."

When young girl I went to school to a young and very devoted Baptist minister who wrote a motto on the blackboard, and had all the scholars read it with him in concert until we learned it. It was this: "Those are our best friends who tell us of our faults, and teach us how to correct them;" and it was my respect for Mr. Root, and love for his soul, that caused me to write as I did; but more especially for my son. But there was this one flaw in my article, and he has published it all over the United States, and it has greatly misrepresented my principles. When I read the A B C of Bee Culture I could not have thought that he could ever have so erred; but, to err is human. I believe that A. I. Root is a superior man, and that he started right; that he has superior business tact, and it is getting ahead of him, so he has no chance to search the Scriptures. He can go to church on Sunday, and trusts too much to his good pastors instead of searching more for himself. His main fault is in not realizing that A. I. Root is not deserving any praise for his tact, for God only gave it to him to secure the avails for his own glory. I hope that Mr. Root will never again publish that a woman professing religion could be so dishonest and unwise as to do as he assumes that I might have done, unless he says boldly that I am a hypocrite of the blackest dye.

For fear Mr. Root may think I favor the poor because I am poor, I will say that my husband is a money-loaner, and all my relatives, so far as I know, are considered well off, but are not millionaires. I am not keeping bees for a livelihood.

Bradford, Iowa, June 29. MRS. F. A. DAYTON.

[My good friend, I never once thought of your being other than a sincere and earnest Christian. But earnest Christians are often led into making grievous mistakes, and mistakes that harm and hinder the very cause they love; and I still think that this matter of being in haste to think evil is one of the saddest mistakes of the present day. We are all of us more or less guilty. May the kind Father help us!]



A bruised reed shall he not break, and the smoking flax shall he not quench.—ISAIAH 42: 3.

WE are raising queens now in the house-apriary. Not so bad a plan, after all.

ACCORDING to our Honey Column, elsewhere, there is very little new white honey on the markets as yet.

SINCE our editorial in our last issue, referring to the delinquency of new bee-papers, quite a number of the missing journals have put in an appearance.

MR. DOOLITTLE says (p. 585), that "the purity of a queen can not be told by her looks." Quite right, Bro. D. We have more jangles with our (ignorant) customers on this point than on any other.

AMONG our poultry exchanges there is none better printed or edited than the *Fancier's Monthly*, published by James R. Parker, San Jose, Cal. The price is \$1.00 per year; or clubbed with *GLEANINGS*, \$1.75.

WE see by the *American Bee Journal* that some credit is due to the manager of the Union, T. G. Newman, as well as to Prof. Cook, for securing the privileges we now enjoy of having imported queens free of duty.

WE have just received some samples of yellow bees from J. F. Michel, German, O., and from Leininger Bros., Fort Jennings, O. They are beautiful to look upon. While we should be glad to continue our notices of these yellow bees from other breeders, our space is so crowded that we shall be compelled to do so no more.

OH dear! we are having trouble with the Doolittle cell-cups. The bees clean 'em all out, build comb over them, and disregard them entirely in some cases. The fault is with us, for we have made them work, and we have a number of excellent reports from those who are succeeding with them. If others make a success of them we can.

HANDLING HIVES: THE BEE-KEEPER WHO IS GOING TO WIN.

WE would call especial attention to a valuable article on handling hives instead of frames, from the pen of that veteran bee-keeper, C. J. H. Gravenhorst, editor of the *Illustrierte Bienenzzeitung*, a German bee-paper of no ordinary standing. This is a vital subject, and we are glad Mr. Gravenhorst has given his experience along this line. Close competition and poor honey-seasons, such as we have had, mean that we must produce a ton of honey with less labor, and that is, handling hives instead of frames. Mr. James Heddon deserves no little credit for advancing this idea of late; but he is by no means the pioneer in it. Since we have been handling fixed frames we have seen the possibilities in handling hives, and the time is fast approaching among progressive (not conservative) bee-keepers when they will find queens, ascertain the amount of stores, and diagnose a colony in a dozen other ways, with a tenth part of the labor. Old fogies need not pooh-pooh at this; if they do, they will be left in the race on profits. Let this subject be discussed. We have lots of room for such articles.

E. FRANCE, in a letter dated June 28, writes that the bees are gathering a very poor and dark honey, and but very little of that. Little or no honey he says is coming from white clover or basswood. The latter will be out of bloom in a few days. While this is discouraging for friend France, we have very encouraging reports from others; such as, for instance, "The best honey season ever known;" and, "Fine honey-flow," etc. At the Home of the Honey-bees the flow has been exceptionally good, both from clover and basswood. At this date, July 14, the latter is yielding honey, and clover is out, even yet.

WE never had such a rush for queens as now. For the past few weeks we have been sending out, on an average, about a hundred queens a week, and we have sent over forty in one day. With our large business in sending bees out in colonies and nuclei, it has been impossible for us to rear all these queens. In fact, it is nearly all our own apiary can do to rear queens for express orders. Those sent out by mail are reared by neighbors H. and Rice and two or three of the oldest and best queen-breeders in the South. We don't breed for color, but for gentleness and business. This, together with promptness, is what brings this rush of orders. In most cases we have sent queens by return mail.

THE NEW BENTON INTRODUCING-CAGE.

THE introducing feature of the new Benton cage works to perfection in our apiary. There is a small hole, $\frac{5}{16}$ in diameter, through which the bees eat out the candy. For 24 hours, only one bee can work at it at a time. For the next 36 hours, two or three bees; and for the next 12 hours, a dozen or so. In the majority of cases the candy is eaten out in 48 hours; but the hole is so small at the extreme end of the cage that it takes about another 12 hours for the queen to find her way out. This is quite an advantage. In 48 hours there might be some bees that would ball her; but it is very seldom indeed that they would attempt it inside of a cage. After many bees have been in there a while and gone out, they all come to regard her as the rightful reigning sovereign; and when she does get out, she is accepted. So far we are inclined to think it is the best introducing-cage we have ever had—equal to the Peet, and—oh so much less work! We are sending queens in it with success to all parts of the country. C. W. Costellow deserves credit for making the size just right for one cent, but our boys put on the introducing feature—let's see, way back in 1888.

THE NEW CLARK SMOKER.

WE have been making some decided improvements recently in the Clark smoker. One of these improvements was made at the suggestion of Dr. C. C. Miller; and that was, that the end of the fire-cup be perforated to admit of more draft. Another improvement consisted in perforating the underside of the smoker so that the fuel burns much more vigorously. Another feature is the substitution of a neat brass tube instead of a tin tube, that will occasionally send a stream of smoke "cross-eyed" as it were. The new smoker is so much better than those sent out in 1890, and a part of this year, that our later customers will readily appreciate the change. We have obviated the fire-dropping features by means of the extra ventilating perforations, and the door is so constructed as to shut tight. The volume of smoke is almost as dense and conquering as that from the hot blast; and, at the same time, it will send it

down six feet through a pile of supers. Dr. Miller is very much pleased with it, and says it will burn wet shavings. In a letter just received, he adds: "Do you know that, in the last year or two, you have practically reduced the price of the Clark to less than half, by making it last so much longer?" Those of you who have the old smokers can very greatly improve them by punching about a dozen nail-holes in the end of the fire-box, and as many more midway between the large end and the apex of the cone. Just try it, and see how much better it is. Then close the fire-door tight. By the way, the new fire-door is now so made that no sparks can drop out around it and burn dress, fingers, and hive-covers.

GOING BACK TO LANGSTROTH AND QUINBY.

How often, when we think we have invented something new, we find, by referring to Quinby or Langstroth, that the idea was first originated by them! There is a strong tendency now toward the flat cover. This we find described in Langstroth's work, issued away back in 1852. This flat cover is all complete with cleats nailed on the end. Everybody nowadays seems to be going back to the eight-frame idea. Why, that came from Moses Quinby, L. L. Langstroth, and Adam Grimm, away back in the 60's. Thick and wide top-bars is another new fad. Still, we find essentially the same thing described in Langstroth. Chancing, a few days ago, to look over some old hives, some that were made after Langstroth's early instructions, we observed that the frames all had top-bars $1\frac{1}{4}$ inches wide, and $\frac{3}{8}$ deep. The combs had been cut out of these frames; but by the propolis accumulations on them, it was evident that they had been used for a number of years. The remarkable part about it all is, that they showed no traces of burr-combs. Again, there is a very strong tendency toward fixed distances. Here again we are going back to father Quinby. Why in the world did we not catch on to these things earlier? And, again, is it not remarkable that fathers Langstroth and Quinby were so generally right?

STICKING TO OLD NOTIONS, OR RETRACTING ON REASONABLE EVIDENCE.

W. Z. HUTCHINSON, of the *Bee-keepers' Review*, has somewhat modified his conclusions in reference to the use or non-use of foundation in the brood-nest; and in a paper which he read before the Ohio State Bee-keepers' Association at Toledo he gave expression to these words: "I know it is not customary for authors or editors to acknowledge their errors; but, let me be editor or orator, I shall always proclaim what I believe to be the truth, even if it does conflict with my former published conclusions." That has the right ring to it, Bro. H. Would there were more authors, editors, and orators, or, if you please, contributors, who would be willing to retract some of their published statements. If there is any one thing that does the pursuit damage, it is the persistent clinging to old notions. A man who can not change his opinion occasionally, on reasonable evidence, is a man whose opinion should not be trusted too implicitly. We know of some people among the bee-keeping craft—good bee-keepers and contributors, who, when they have once published a certain view, never change it, and who go still further to bolster up and strengthen that opinion or supposed fact. As our readers know, we have abandoned the ten-frame idea and the beveled edge on hives—that is, we do not recommend them any more. It is no weakness to change your mind; but when it is necessary, come out and say so like a man.